

ECONOMIC, FINANCIAL AND TRANSIT
DEPARTMENT

International Currency Experience

Lessons of the Inter-War Period

LEAGUE OF NATIONS

1944

Reprinted by United Nations—1947

TABLE OF CONTENTS

PREFACE	5
I. INTERNATIONAL MEANS OF SETTLEMENT: CHANGES IN TOTAL DEMAND AND SUPPLY	7
1. Introduction	7
2. Factors Governing Demand	9
3. The Supply of Gold	16
4. Problems of Regulation	20
II. THE GOLD EXCHANGE STANDARD	27
1. Origin and Growth	27
2. Functioning and Breakdown	33
3. Merits and Defects of the System	41
III. THE STERLING AREA	47
1. Underlying Conditions	47
2. Exchange Rates in the Sterling Area	50
3. Reserve Funds of Member Countries	54
4. The Position of the Centre	60
IV. CENTRAL BANKING AND INTERNATIONAL CURRENCY RESERVES	66
1. The "Rules of the Game"	66
2. Neutralization, Designed and Undesigned	68
3. Distribution of Reserves	88
4. Central Banks' Reserve Requirements	94
5. Adjustment of the Balance of Payments	98
6. The Search for Stability	105
V. EXCHANGE FLUCTUATIONS	113
1. Exchange Depreciation in the Early 'Twenties	113
2. Currency Stabilization, 1922-28	116
3. Freely Fluctuating Exchanges	117
4. The Devaluation Cycle of the 'Thirties	122
5. Devaluation and the Price of Gold	131
6. Exchanges of Primary Producing Countries	134
7. General Conditions of Exchange Adjustment	136
VI. EXCHANGE STABILIZATION FUNDS	143
1. Intervention in the Exchange Market	143
2. Effects on Domestic Credit Structure	150
3. Contributions to Currency Machinery	155
4. Special Points	157

VII. EXCHANGE CONTROL	162
1. Control of Capital Movements	162
2. Exchange Control and Exchange Rates	166
3. Exchange Control and Trade Regulation	172
4. Exchange Control as an Instrument of Bilateralism	177
5. The Principal Functions Reviewed	183
VIII. THE STRUCTURAL ENVIRONMENT	190
1. Importance of Non-Monetary Conditions	190
2. Problems of Agricultural Countries	192
3. The Spread of Industrialization	195
4. Depression and Prosperity	199
5. International Investment	202
6. Commercial Policy	206
IX. REVIEW AND CONCLUSION	210
1. The Need for Stable Exchanges	210
2. International Currency Reserves: Their Function, Forms and Distribution	212
3. Exchange Control and Exchange Adjustments	220
4. Domestic Stability as a Prerequisite of Exchange Stability	229
STATISTICAL APPENDICES:	
I. Gold Supply	233
II. Foreign Exchange and Gold Reserves	234
III. Reserves of Sterling-Area Countries	236
IV. 1. Changes in Central Banks' International and Domestic Assets	237
2. Distribution of Gold Reserves	240
INDEX	241

Series of League of Nations Publications

II. ECONOMIC AND FINANCIAL

1944.II.A.4

PREFACE

THE purpose of this volume is to consider the lessons that may be learnt from the story of international monetary relations during the inter-war period. No other period of equal duration affords so great a variety of experience; in no other period were so many experiments deliberately or fortuitously undertaken; in no other period was the influence of extraneous events on monetary relations or of monetary policy on economic conditions greater.

With the detail of the history so rich in incident this book is not concerned. The story is related in bold outline and the evidence is collated and analyzed in such a manner as to throw the major facts and sequences of events into perspective and with the object of deriving from those facts and sequences the conclusions that would appear to be of major importance for the formulation of policy in the future. The conclusions reached are summarized in the last chapter.

But though its primary object is to assist in the formulation of policy, it is hoped that this volume may prove of value also to those whose concern with monetary questions is less pragmatic.

The greater part of this volume is the work of Mr. Ragnar Nurkse; but Chapter VI was written by Professor William Adams Brown, Jr.

Certain chapters were originally drafted as independent documents and circulated to various experts for criticism. Many of the comments received, for which our sincere thanks are due, have proved of great value.

A. LOVEDAY

*Director of the Economic,
Financial and Transit Department*

League of Nations
April, 1944

CHAPTER I

INTERNATIONAL MEANS OF SETTLEMENT: CHANGES IN TOTAL DEMAND AND SUPPLY

I. INTRODUCTION

AFTER the last war it was generally considered part of the "return to normal" to go back to the international currency system, based on the gold standard, which had been established over a large part of the world by 1914. Accordingly practically all countries, some after a period of highly unstable domestic currency conditions accompanied by violent depreciation of their exchange rates, returned to or introduced this system in the 'twenties by stabilizing their currencies in terms of the old or, in most cases, new gold parities. Gold became "more universally than ever before the foundation of the credit structure throughout the world."¹

Long before the stabilization process was concluded, however, there was concern among economists and governments lest there should be too small a supply of gold to meet the monetary demand. The chief recommendation of the Genoa Conference in 1922 was that the gold exchange standard should be established as widely as possible in order to avoid the scramble for gold that might ensue if all the countries wanting to restore the gold standard were to absorb gold in their central reserves.

The gold exchange standard was successfully extended in the 'twenties, thus meeting a substantial part of the total demand for international currency in the form of foreign exchange reserves instead of gold. Another source of relief was the substitution of bank notes and deposits for gold coins in domestic circulation, which produced a considerable accretion to central gold reserves. The amount of gold coins withdrawn from circulation between 1913 and 1925 (some \$2,670 million, making a yearly average of about \$200 million) was more than sufficient to compensate for the decline in gold output which took place after 1915 as a result of the rise in costs and prices.

The danger of a scarcity of gold seemed thus to be averted. It began to threaten again, however, in 1928 when France legalized her return to the gold standard and started to accumulate gold through a surplus in the current balance of payments as well as through repatriation of private funds. Moreover, commodity prices in the world market had been falling since 1926. Gold production had made only a partial recovery in 1923 and remained practically stationary for six years. By 1929 there had developed a widespread fear that the new production of gold in the future would be inadequate, on the basis of the

¹ Gold Delegation, *Selected Documents* (League of Nations, 1930), p. 53.

existing rules governing reserves, to meet the monetary demand without a further decline in the world price level. An investigation of this problem was opened by the Gold Delegation of the Financial Committee of the League of Nations in June 1929. In its first Interim Report, the delegation expressed the opinion that if prices were to be maintained at about the level ruling at the end of 1928, it was very probable that the supply of gold would soon prove to be inadequate, since the information assembled by the delegation indicated that the output of gold could be expected to decline from about 1933, while it was likely that the demand, both for monetary and for non-monetary purposes, would increase.

Subsequent events deprived these estimates of their basis. True, the liquidation of the gold exchange system, beginning with the change in French policy in 1928 and ending in a complete collapse of the system in 1931-32, suddenly aggravated the shortage of international currency. But on the other hand, the world output of gold took an upward turn under the influence of falling costs and commodity prices in the depression which set in in the autumn of 1929; large amounts of gold were dishoarded in the Orient; and above all, the wave of currency depreciation which started with the decline of the pound sterling in the autumn of 1931 meant a rise in the market value of existing gold stocks and led to a sharp increase in the quantity as well as the value of new gold production.

In the 'thirties, consequently, the situation was almost the reverse of what it had been in the 'twenties. Moreover, the great expansion in the supply of gold coincided with certain developments which tended to reduce the demand for it. First, the gold exchange standard was succeeded over a certain area—the "sterling area"—by a system in which sterling balances could be used as international currency in place of or in addition to gold. Secondly, Germany and a number of other countries which clung to their old currency parities virtually abandoned the use of any international currency and resorted to various forms of international barter conducted through rigid exchange controls.

Thirdly, whenever exchange rates were left free to fluctuate, the use of international currency could be dispensed with, exchange fluctuations taking the place of gold or foreign-exchange transfers as the balancing element in the mechanism of foreign payments. It is doubtful, however, whether this factor was actually of any great importance in reducing the need for international means of settlement. As we shall see, *freely* fluctuating exchanges were far from common in those years. Exchange rates changed indeed; but the changes were usually controlled. For considerable periods at a time, rates were "pegged" or kept within certain limits of variation through sales and purchases of gold and foreign balances either by central banks or by special exchange stabilization funds set up for the purpose. In this system of

managed though flexible exchanges, gold—though increasingly divorced from national credit structures—came to play a very important role as a medium of international settlement and particularly as a vehicle for the “hot money” transfers which arose largely from the very fact of flexible and hence uncertain exchange rates. After the devaluation of the gold bloc currencies in September 1936, the flexible gold-settlement system was given a formal basis under the Tripartite Agreement; the United States Treasury provided a market for gold at the new price fixed in January 1934, and in most other countries the market price of gold was determined directly or indirectly by the current rate of exchange on the dollar.

As already observed, the rise in the market price of gold in all those countries which let their currencies depreciate in terms of gold during the 'thirties led to a considerable increase in the amount of gold available. The decreased demand for gold in certain areas combined with the increased supply changed the general situation from one of imminent scarcity to one of apparent superabundance, which at certain moments gave rise to as much alarm as had the opposite situation earlier.

From this preliminary survey of the period with which this volume is concerned we must now turn to a more detailed discussion of the forces governing the demand for and the supply of gold as the principal form of international currency during this period. We shall have to mention the subsidiary forms as well—the exchange reserves held under arrangements such as the gold exchange standard and the sterling area—but a fuller treatment is reserved for them in Chapters II and III.

2. FACTORS GOVERNING DEMAND

The demand for gold in the period under review depended on a variety of factors which it may be well to consider under four heads:

- (a) The demand for industrial uses.
- (b) The private hoarding demand.
- (c) The minimum reserves of gold, or gold *plus* foreign exchange, required by law as cover for the central banks' note issues or for their note issues and sight deposits combined.
- (d) The amount of “excess” reserves required to meet “differences” in the balances of payments which had to be settled by transfers between countries of gold or foreign assets.

Little need be said on the first two items. It is the third and fourth—the monetary demands properly speaking—that will concern us most.

(a) The industrial demand for gold absorbed approximately 25% of the gold production of the world in the 'twenties.¹ The amount

¹ Cf. *Interim Report of the Gold Delegation* (League of Nations, 1930), p. 90, where after certain adjustments the net industrial consumption of gold during

taken by industry fell sharply in the depression and remained low throughout the 'thirties, the demand being evidently very elastic in response both to changes in income and to changes in the price of gold (*cf.* Appendix I).

(b) In the West, where after the war of 1914-1918 gold coins were almost entirely replaced by notes and deposits as circulating media, there was relatively little private holding of gold as long as currency conditions were stable. A strong incentive to hoard arose, as we shall presently see, only when the fixed gold price in terms of local currency had already been abandoned or when it was expected to be abandoned in the future.

In the East, on the other hand, there was a demand to hoard gold that was largely independent of speculative factors. Gold was demanded for its own sake as a symbol of riches and was the traditional medium in which savings were held. Hence the amount of gold absorbed by the East over any period was chiefly dependent on the level of prosperity: it tended to rise when prices were high and savings increased and to fall, or even become negative, when prices were low and savings decreased. In the depression years 1920-22 India absorbed very little gold. As economic conditions improved in the years following, the rate of absorption rose. It declined again, however, after 1929 when commodity prices fell. After September 1931, the price of gold itself rose in terms of the rupee (which depreciated along with the pound) and this induced Indians to sell large amounts of their gold holdings. Most of this gold found its way, in the first instance at any rate, to London, and the proceeds went to strengthen India's sterling reserve. Some gold also came from China, mostly through Hongkong, and from other countries in the East.

It was just at this time that conditions in the West produced a substantial hoarding demand there, and a large part of the gold previously held by hoarders in the East passed into the hands of hoarders in the West. In later years the demand from this source continued to fluctuate widely according to changes in expectations about future currency conditions and the price of gold, or according to actual or anticipated legislation concerning private gold holdings.

(c) The statutes of practically all central banks during the inter-war period required some definite relation between the gold reserve, or the gold reserve *plus* foreign exchange, and the note issue, or the note issue *plus* other sight liabilities. Usually what was required was a minimum percentage ratio of the former to the latter, though several countries preferred the English system of a maximum fiduciary issue beyond which bank notes or, as the case might be, all sight liabilities had to be covered in full by gold or gold and foreign balances.

1925-1929 is estimated at an average of \$100 million per annum. The gross yearly figures shown in Appendix I, which take no account of those adjustments, are indicative of the year-to-year changes rather than of the true absolute level.

In some countries, banks could let the cover fall temporarily below the prescribed minimum, but only at the penalty of a special tax payable to the government.

These regulations will be considered more fully in Chapter IV, Section 4. Their purpose was to set a limit to the expansion of domestic money¹ and thus to safeguard the public's confidence in the currency. In the stabilization process during the 'twenties, confidence seemed a vital condition. The post-war inflations had left a deep impression; and so the cover requirements were often fixed at a higher level than before the war.

This system, however, had implications of great consequence. It meant that the cover reserves were not really international currency at all. They could be turned into international currency only by reducing the sight liabilities, thereby releasing a part of the reserve from the cover function; and this deflationary method of increasing the free international cash reserves was not infrequently brought into operation. In 1930, for instance, there was a fall in central banks' sight liabilities, without any reduction in gold and foreign exchange holdings, in a number of countries, including Czechoslovakia, Finland, the Netherlands, Norway, Peru, etc.

What has just been said applies, of course, to countries providing for a fiduciary issue as well as to those requiring a minimum percentage ratio. Thus it was pointed out in the Macmillan Report that "the effect of enforcing the principle of the fiduciary issue is to forbid the Bank of England to use by far the greater part of its gold for the only purpose for which it is held or could be used," "the sole purpose of a gold reserve today" being "to enable a country to meet deficits in its international balance of payments."²

Even though nearly all gold coins had been withdrawn from circulation, gold in the vaults of central banks was still needed for domestic purposes under the system of cover requirements. With a gold cover ratio of 33%, for instance, every third bank note was in effect a gold certificate, a warehouse receipt for gold; and in this form gold may be said to have virtually remained in domestic circulation despite the withdrawal of gold coins.

Under this system the phrase "economy of gold," which was so often heard in the 'twenties, had a special and definite meaning, which had nothing to do with economy of productive resources through a reduction of gold mining. It meant simply the release of gold stocks from the cover function for the international currency function, and more particularly a release obtained without resort to the deflationary method just mentioned.

¹ There was no corresponding limit to contraction: nowhere did the statutes prescribe a *maximum* ratio of gold reserves to note circulation.

² *Report of the Committee on Finance and Industry* (London, 1931), pp. 122 and 139.

The gold exchange standard was an attempt to "economize gold" in this sense, an attempt which took the existing cover requirements for granted. Later, the Gold Delegation of the League of Nations proposed a general and concerted reduction of cover requirements, concerted in order to avoid upsetting confidence in any particular currency or currencies. A minority of the delegation even suggested abolishing cover requirements altogether. The proposal for a general cut in reserve ratios was made again at the London Monetary Conference in 1933. In fact, several countries during the 'thirties lowered their legal reserve requirements. Before 1939, the only countries that abolished them altogether were Germany and Italy, which not only freed but actually used up practically the whole of their central-bank reserves of gold and foreign exchange. At the outbreak of war in 1939, the gold reserve of the Bank of England was transferred to the Exchange Equalization Account, except for an insignificant amount retained in the bank, and the fiduciary issue was correspondingly increased. These measures, of course, were measures of war economy and not of monetary reform.

The proportion in which total reserves were divided between required and "surplus" reserves in certain inter-war years may be illustrated by a few figures.¹ An estimate for 1929, covering practically all currency authorities in the world, puts the total of central gold and foreign-exchange reserves at about \$14,700 million. Of this \$7,750 million was legally required for cover purposes, leaving a surplus of \$6,950 million.

Another estimate relates to the two years 1929 and 1936, but covers only the gold (not foreign exchange) reserves of forty-one countries excluding Germany and Italy.²

	Total Amount Held	Amount Legally Required	Surplus
	\$(000,000's) of old gold content		
1929	9,378	7,200	2,178
1936	13,127	6,018 ^a	7,109

^a Amount "corrected" according to actual exchange rates. If counted at book values, the amount would be \$7,687 million, the difference being due to the fact that a number of countries with depreciated currencies had not yet written up their gold reserves.

¹ These figures are subject to a qualification. Central banks, for fear of having to break the law, were usually anxious to keep some minimum margin over and above the legal ratio. If, for instance, the legal ratio was 33%, a bank might want to maintain a "cushion" of 7%, and this 7% was in effect tied up just as the 33%, though less rigidly. The true amount of cover reserves was therefore probably higher, and the line of distinction between "cover" and "international currency" reserves less clear-cut than is suggested in the text.

² League of Nations, *Money and Banking 1936/37*, Vol. I (Monetary Review), p. 71. To this volume reference should be made for explanatory notes concerning in particular the way in which the "amount legally required" has been calculated.

In 1936, the "surplus" gold was larger than the amount legally required (if calculated at market rates of exchange for each country), reflecting the great expansion of the gold supply which took place in the early 'thirties. This change in total supply will be discussed in the next section. But even in 1929, if we take the comprehensive estimate including foreign exchange as well as gold, the surplus was large—nearly as large, in fact, as the cover required by law. Was there any reason, then, to speak of a gold shortage in 1929?

The term "surplus" is, of course, misleading. It implies that to act as cover was the only real use of gold and exchange reserves, the rest being, as it were, unemployed; and on this view the figures show that the cover demand was met in full with a wide margin left over, so that a shortage could hardly have existed. But in reality there were two competing monetary demands: one for legal cover to "support" national currency and credit structures and the other for international currency. The national currency and credit structures could not have been expanded without drawing upon the stock of international currency. An increased demand for international currency, on the other hand, could not have been met without forcing a contraction in the cover base through contraction in national currency and credit supplies.

This leads us to examine the conditions governing the demand for "surplus" reserves, that is, for gold and exchange reserves available for international settlements.

(d) It seems best to approach the question from a general point of view. International currency in its proper function as a means of payment is required in order to meet discrepancies in the international accounts. The total amount required for this purpose depends ultimately, therefore, on all those factors which influence the various countries' balances of payments with the rest of the world.

One might suppose that the demand for international means of settlement varies with the volume of international transactions (trade, etc.) just as the demand for domestic currency tends to vary with the volume of domestic business. But there is not a complete analogy between international and domestic currency. The bulk of international transactions is "cleared" in the foreign exchange market. International currency in the sense of a central reserve of international means of payment is only required, as just mentioned, for meeting *discrepancies* in a country's balance of payments. If it is generally true, nevertheless, that demand for international means of settlement is likely to be larger the larger the volume of international business, this is so because a larger volume of international business is likely to give rise to larger discrepancies.

Demand for international currency varies also as between different types of countries. In the period reviewed, agricultural-exporting countries, for example, had a relatively great need for international

cash reserves because they were exposed to wide fluctuations in the world market prices of their products and also, at certain times, in the flow of foreign capital; and at all times the balance of payments of such countries is subject to disturbance on account of crop fluctuations.

But the special problems of various countries or groups of countries will be considered in Chapter IV. Here we are concerned with demand for international currency in the aggregate.

Under a regime of freely fluctuating exchanges there would be no need, in theory, for any international currency reserves, since exchange fluctuations would automatically maintain the international accounts in balance and prevent or eliminate any discrepancies.

Under a regime of stable exchanges, discrepancies could also be prevented and the need for international currency accordingly reduced or eliminated.¹ But this would require very close coordination of domestic policies affecting national incomes and prices in the various countries. Thus it is theoretically conceivable that, with appropriate management of the domestic conditions of supply and demand, each country's foreign receipts and payments, including any commercial and investment loans, could always be kept in balance, so that the exchange rate, though stable, would always constitute an equilibrium rate in this sense.²

The initial exchange rates that emerged from the stabilization process in the 'twenties were in many cases out of line with existing price and income levels. As a result, discrepancies tended to arise in the international accounts, which from the very start created a demand for the means of settling them.

Apart from such initial disparities, a basic factor determining the total demand for international currency in a system of stable exchanges is, as just observed, the degree of coordination or "synchronization" of domestic conditions in the various countries. Before 1914, changes in price levels, national income and business activity were synchronized to a relatively high degree. In the inter-war period, on the other hand, synchronization was very imperfect; there was a marked trend towards monetary "autarchy" and a frequent reluctance to allow booms or depressions abroad to affect domestic stability. Because of this lack of synchronization, the total amount of international currency needed as a buffer stock to meet discrepancies in balances of payments was relatively large.

¹ Of course, a perfect equality of foreign receipts and payments from day to day or even month to month is hardly possible. Seasonal fluctuations alone make temporary discrepancies inevitable. The most one could envisage is elimination of discrepancies over periods of, say, twelve months.

² This does not necessarily presuppose a perfect flexibility of domestic prices. If prices and wages fail to respond to a downward pressure, the balance of payments could still be kept in equilibrium through contraction of aggregate demand and employment. But an exchange rate maintained at the cost of large-scale unemployment is not an equilibrium rate in a more fundamental sense.

The cover requirements discussed before might perhaps be regarded as an attempt to enforce precisely such synchronization. Even without any legal percentage ratio, there would, of course, still be a minimum—namely, zero—and if a central bank saw its international cash reserve approach that minimum, it might feel compelled to take action tending to reduce domestic credit and national income and so restore equilibrium in the balance of payments. Thus a certain measure of synchronization might still take place. It is clear, however, that if a large part of the international cash reserve is virtually blocked through legal cover requirements, the volume of international currency proper is less than it would otherwise be, so that countries are called upon to keep more closely in step with each other if stability of exchanges is to be maintained. The smaller the total volume of international currency, the less latitude there is for individual countries.

As noted before, diversity of national policies and conditions tends to give rise to a larger demand for international currency in the world as a whole. But it does not follow that a greater degree of coordination could be achieved simply by cutting down the volume of international currency. This could scarcely be expected in a world in which many governments have become conscious of a greater responsibility for maintaining economic stability and social security. A synchronization involving each country in booms and depressions originating elsewhere has therefore tended to become less and less acceptable. But there may be no reason why synchronization should not prove acceptable if it meant general stability at a level of reasonably full employment. If synchronization of the latter kind is unattainable, as it was in the inter-war years, the demand for "buffer stocks" of international currency is necessarily larger than it would otherwise be.

There was another important factor governing the demand for international cash reserves in those years. Before 1914, any temporary balance-of-payments discrepancies arising from incomplete synchronization were normally settled to only a relatively small extent by actual transfers of gold. Private short-term credits provided an additional and highly effective mechanism for meeting such discrepancies. Small changes in discount or exchange rates were usually sufficient to induce capital movements of this sort. When there was a tendency for gold to flow out, private funds would be quickly attracted by a rise in bank rate or by a fall in the exchange rate to the gold export point, as the exchange could not fall below that point but could well be expected to rise above it sooner or later.

This delicate mechanism of equilibrating capital movements depended largely on confidence, and confidence was largely destroyed in the post-war currency upheavals. True, there was a revival of such equilibrating movements at certain times, especially during the years

1925-28 (though even in that period there were important movements of a disequilibrating kind, such as those from and to France). On the whole, however, the mechanism worked less efficiently than before the war, and accordingly there arose a greater demand for central gold and exchange reserves to replace it in the settlement of deficits in balances of payments.

The movement of long-term capital in the 'twenties was generally of an equilibrating character; but the movement was irregular, and borrowing countries frequently had to keep large short-term balances abroad in order to meet fluctuations in foreign lending. In the 'thirties, long-term foreign lending practically ceased.

But that is not all. The flow of short-term funds, especially in the 'thirties, often became disequilibrating instead of equilibrating, or instead of simply coming to a stop. When for any reason the balance of payments turned adverse, a rise in the bank rate would be taken as a danger signal and a fall in the exchange would create expectations of a further fall, so that funds would tend to move out instead of in. The flow of capital would thus create or increase international discrepancies, instead of meeting them, and so the demands made on the stock of international currency were greatly increased. Gold, which constituted the bulk of that stock, became to a large extent a vehicle for "hot money." In the years 1933 to 1938, for example, by far the greater part of the variations in the central gold reserves of countries such as France, the United Kingdom and the United States was due to capital movements of this type.

It may be noticed incidentally that the need for gold for "hot money" transfers was in certain respects essentially similar to the private hoarding of gold. In France, the private hoarding of gold was prohibited in 1936 (as it had been in the United States in 1934) but French capitalists were free to buy dollars; and when they did so on a large scale, the French authorities had to transfer large amounts of gold to the United States where it was held in the central reserve in counterpart of the dollar assets held by Frenchmen. Similarly the British Exchange Equalization Account at certain times "hoarded" large amounts of gold, as it were, on behalf of French capitalists.

We have now seen that practically all the factors that are capable of increasing the aggregate demand for international means of settlement were active both in the 'twenties and even more so in the 'thirties. Next we go on to consider briefly the reactions they produced on the supply side.

3. THE SUPPLY OF GOLD

During the inter-war period, increases in the monetary demand for gold could and did express themselves in two ways: in a reduction in prices of goods and services other than gold ("deflation") or in a rise in the price of gold itself in terms of national currencies ("devalua-

tion"). While the former had always played some part in the gold standard mechanism, giving some if only a slight degree of elasticity to the gold supply, the latter was new at any rate in the scale of its application. Both methods, however, derived from the simple fact that the profitability of gold mining, which largely determined the volume of current output, depended naturally to a great extent on the *relation* of the price of gold to the prices of other goods and services.

Thus, as a result of rising costs and commodity prices, the world output of gold declined sharply from 1915 (see Appendix I). With the post-war slump in prices on the world market, the decline slowed down in 1921-22 and gave way to a recovery in 1923. From 1924 to 1929 gold production remained virtually constant at a level about 20% higher than in 1922, or about half-way between the peak of 1915 and the trough of 1922.

From 1929 to 1930 output suddenly increased by practically 10%. This was clearly due to the world-wide fall in commodity prices. After 1930 the influence of "deflation" on the world output of gold became increasingly intermingled with that of "devaluation," and the latter was soon to become predominant. Thus the Australian pound began to depreciate heavily towards the end of 1930 and Australian gold output rose by over 25% in 1931. But a number of gold producing countries adhered, for a time, to their currency parities even after the fall of sterling in September 1931, and yet even they showed an increase in gold production, as a result of the drop in prices of mining equipment and materials and frequently also in labour costs. In South Africa, where devaluation did not occur till January 1933, there was little if any reduction in miners' wages, but the depression in agriculture and other occupations greatly increased the supply of labour available for the gold mining industry, and so production in that industry increased in spite of the rigidity of wage rates.

In 1933 and 1934, however, the South African gold output declined even though the devaluation had greatly increased the price of gold in South African pounds. This was due partly to higher taxation of gold mining profits and partly to a deliberate policy of the mining companies tending to concentrate production on low-grade deposits and to keep the richer ores in reserve. In the later 'thirties, South Africa's output increased once more, but her share in the world total remained considerably smaller than it had been in the 'twenties.¹

In 1936, the currencies of the twenty-three principal gold mining countries (outside the U.S.S.R.), weighted according to their gold output in that year, had depreciated by about 43% on the average, which meant that the price of gold in these countries was, on the average, 76% higher in 1936 than in 1929. At the same time, prices

¹ In 1937, her share in world production of gold (excluding the U.S.S.R.) was 40% as against 56% in 1929.

of other goods in these countries were, on the average, about 15% lower than in 1929.¹ The exchange value of gold in relation to other commodities was thus more than doubled.

The effects of this striking change in the price relationship were equally striking. The rapid rise in the world's gold output during the 'thirties may be seen from Appendix I. The quantity of new gold produced in 1938 was twice as large as in 1928. No great discoveries of new gold deposits, comparable to those in California at the middle or in the Rand at the end of the nineteenth century, were made during the 'thirties. But the expansion of output in response to the relative price changes in those years was fully comparable to any of the nineteenth-century discoveries.²

So far we have considered the gold supply in terms of physical quantity. The increase in the quantity produced might well have occurred if the gold producing countries alone had resorted to devaluation and so increased their price of gold. Had they exported the increased output, the gold reserves in the rest of the world would have increased, but not more than in proportion to the increase in the physical quantity.

In fact, however, "devaluation" was practically universal. The resulting increase in the price of gold amounted to about 70% on the average.³ Thus the quantity of new gold mined in 1938, which was twice as large as in 1928, had a value which was about three-and-a-half times as great as the value of the gold produced in 1928. At the same time, it should be noted that commodity prices in most local currencies remained well below the pre-depression level.

Furthermore, the actual market value of the pre-existing monetary gold stocks was also raised by 70% on the average. Thus the total reported gold reserves held by central banks and governments in 1928 were worth 70% more in 1938. But in physical quantity this total increased by 50% (see Appendix I), and the gold reserves held in 1938 thus had a value which was about 155% higher than the value of the reserves held in 1928.

True, a number of countries did not immediately write up the central-bank gold reserves they held at the moment of devaluation, though sooner or later most of them did so. But even when central banks continued to show the gold reserves in their balance-sheets at the previous legal parities, devaluation meant an increase in international liquidity, since the "surplus" over and above cover require-

¹ League of Nations, *Money and Banking, 1937/38*, Vol. I (Monetary Review), pp. 9-10.

² It appears indeed that ever since the latter part of the nineteenth century the output of gold has come to be determined more and more by relative changes in prices and production costs rather than by the accidents of discovery or technical invention (such as the cyanide process of extraction adopted in the 1890's). Cf. F. W. Paish, "Causes of Changes in Gold Supply," *Economica*, 1938, pp. 379 ff.

³ See *Money and Banking, 1937/38*, Vol. I, pp. 10-11. The average quoted does not include countries which maintained their currency parities by exchange control.

ments, whenever it was used for foreign payments, was used at its effective and not, of course, at its bookkeeping value. When countries did revalue their gold reserves, this, in addition, had the effect of releasing a certain quantity of gold from the cover function, if the central bank's domestic sight liabilities were not increased in the same proportion as the price of gold. Thus the all-round increase in the price of gold in the various countries, unaccompanied by a corresponding rise in commodity prices, enlarged the supply of international currency irrespective of the expansion in new gold output.¹

The rise in both the price and the production of gold may give an exaggerated impression of the increase in international liquidity during this period. It should be remembered that the international reserve system based on the gold exchange standard was completely liquidated, though in part it was replaced by the growth of the sterling area. A more serious limitation was due to the fact that the increased gold supply was very unevenly distributed among the various countries. The problems relating to the distribution of international currency reserves will be discussed in Chapter IV. Here we are concerned with supply in the aggregate.

The expansion of aggregate supply in the 'thirties was certainly impressive. As will be shown in Chapter V, the devaluation cycle in the 'thirties came about, in the last analysis, largely through a failure to coordinate the internal anti-depression policies of the various countries. As we have seen, such lack of "synchronization" tends to increase the demand for international currency. The very factor which increased this demand thus produced reactions, in the form of devaluation, which tended to meet it in the form of enlarged gold supplies.

The extent of devaluation, however, was frequently determined, as will also be shown in Chapter V, by the short-term and speculative influence of "hot money" transfers. Such transfers were another factor which both increased the need for international currency, and by causing a greater degree of devaluation, produced reactions which tended to meet it. "Hot money" was particularly active at the time of each successive devaluation or just before; and so the degree of all-round devaluation, the average 70% rise in the price of gold and the resulting expansion of gold supplies were probably greater than they need have been but for the momentary impact of speculative forces. Taking a longer view, it would seem that ultimately the increase in gold supplies far outstripped the demand for them as international means of settlement.

After the banking and liquidity crises of the great depression, the 'thirties were, on the whole, a period of cheap money. The 'twenties, by comparison, were a period of dear money. The simple average of central-bank discount rates in ten representative countries (Australia,

¹ For a discussion of these developments in a different context, see Chapter V below, Section 5: "Devaluation and the Price of Gold."

Chile, France, Germany, India, Italy, Japan, Poland, the United Kingdom and the United States) was 3.61% in the years 1935-38 compared with 6.27% in the years 1925-28. The general fall in money rates may have been due in part to the increase in aggregate international currency reserves. But the connection, if any, between the two phenomena could not be construed in the sense that increased gold reserves automatically led to domestic credit expansion and cheap money. Rather, expansion and cheap money were desired and initiated in many countries for the deliberate purpose of improving the state of employment and business activity, and, as a result of devaluation and larger gold supplies, the state of international liquidity was generally such as to place no obstacles in the way of this policy. In certain countries which had little or no "international margin" in the form of gold or foreign balances, expansion was undertaken nevertheless—under the cover of exchange controls. This whole problem will be taken up again in Chapter IV, where we consider the ways in which individual central banks reacted in their domestic credit policy to changes in their international cash reserves.

4. PROBLEMS OF REGULATION

The interaction of supply and demand in the gold-reserve or gold-settlement system of the inter-war period may now be briefly summarized.

Consider, for example, a general rise in demand for international currency. Equilibrium must be restored by an increase in supply and/or a decrease in demand.

As we have seen, international currency was needed to settle discrepancies in balances of payments. Accordingly, demand could be reduced by coordination of domestic policies so as to reduce the discrepancies associated with any given volume of international business. But since, with a given degree of coordination, the size of the discrepancies was likely to vary with the volume of international business, another possible means of reducing demand was to reduce the volume of international business; and this was an important means in fact, though countries may not have realized the global implications of their individual actions.

Thus, if inadequate coordination increased the global need for international currency while supply remained the same, the need could be met by reducing the total volume of trade and other international transactions. If, on the other hand, the increased need for international currency arose from an increase in the volume of transactions, the need could be met by closer coordination of internal monetary policies.

Leaving aside for the moment the role of coordination, which was discussed at length in Section 2, we may distinguish three meth-

ods which, if applied generally, were capable of restoring equilibrium of global supply and demand in the inter-war system:

(1) "Deflation." This tended to increase supply (a) by releasing gold from the cover function, and (b) by stimulating the production of new gold. At the same time it tended to reduce demand by reducing not only the money value but also the real volume of international trade.

(2) "Devaluation." This meant a rise in the price of gold and hence, (a) an increase in the value of the existing stock; (b) a rise in gold mining profits and so an increase in the quantity as well as the value of new gold forthcoming; (c) a release of some gold from the cover function.

(3) Tariffs and other trade barriers. These tended to reduce the demand for international currency in the aggregate by reducing international trade. They played, of course, a prominent role in the inter-war period, but in the present context it is enough simply to mention them.

Though it is from a global point of view that they concern us here, the three methods enumerated were of course open to any single country. Only through their adoption by individual countries did they, in fact, exert a general influence on the supply of and demand for international currency in the system as a whole.

The system was a peculiar one in many respects. Private gold hoarding and speculative capital movements were capable of disturbing it to an extraordinary degree. The cover requirements, though introduced and maintained for what may have been compelling reasons, effectively tied up large amounts of potential means of international settlement; they enforced as it were, a practice of "window-dressing" under which, while the shop might be empty (the "surplus" reserve exhausted), the window had to be kept fully stocked for display.

Above all, the world supply of international currency was not subject to any regulation. National currency supplies could be and were deliberately regulated by national monetary authorities, but the international currency supply was left, in the main, to the play of the "automatic" forces just indicated. It is true that some attempts at regulation were made or at least proposed. The gold exchange standard recommended by the Genoa Conference was one of them; but it broke down at the crucial moment. A South-African economist, Prof. Lehfeldt, proposed an international scheme for regulating the output of gold in accordance with requirements;¹ but it was never adopted.

The Gold Delegation's suggestions in favour of a lowering of the legal cover ratios, suggestions which were repeated at the London Monetary Conference and actually carried out in some countries, may be regarded as another attempt at regulation. But what they primarily

¹ Gold Delegation, *Selected Documents* (1930), p. 50.

aimed at was a more or less permanent measure of monetary reform. The system of legal cover requirements, if it was desired to continue it, could have been used so as to regulate the total volume of international currency (the "surplus" reserves) by temporary increases or decreases of legal ratios in all countries. In practice, no uniform and concerted alteration in reserve requirements was ever accomplished.

There were no proposals for an all-round alteration in the price of gold to regulate the supply of international currency. As it happened, this proved to be by far the most effective means of regulating that supply. But the alteration was neither concerted nor designed; it came about in a haphazard manner through the working of the automatic or quasi-automatic forces indicated above.

All this, however, concerns merely the method of regulation. Another set of problems arises in regard to the criteria on which such regulation should proceed. In the late 'twenties, the prevention of "undue fluctuations in the purchasing power of gold" was generally regarded as the main objective, meaning prevention of undue price fluctuations in terms of the national currencies linked to fixed gold parities. It had been noticed that in earlier times world prices had varied, broadly, with the current supply of gold, and from this it may have been natural to infer that deliberate regulation of the gold supply might do something to steady the course of prices. Before 1914, gold constituted not only an international but also a domestic medium of payment. After the withdrawal of gold coins, the system of cover requirements might have been expected to maintain a link between the gold supply and national prices; but for reasons already noted and further explained in Chapter IV, that link was actually very loose, and the legal cover rules did not, in general, exert any strong influence on national money supplies in the inter-war period. The direct effects, on the other hand, of income generated in gold production were (a) very small and (b) very unevenly distributed geographically. In the discussions concerning the "undue fluctuations in the purchasing power of gold," these facts, indeed, were implicitly or even explicitly recognized. Thus in the reports of the Gold Delegation considerable stress was laid on the need to coordinate domestic credit policies through cooperation between central banks in order to reduce fluctuations in the purchasing power of gold. The ultimate object, of course, was to control the world-wide swings of depression and prosperity inherent in the automatic synchronization of the gold standard mechanism.

In the 'thirties, there was a gradual but persistent change in economic opinion. The price-level came to be regarded more and more as a secondary criterion of economic stability. The state of employment and national income tended to become the primary criterion. There was a similar change of emphasis as regards method: central

banking policy alone came to be regarded as comparatively ineffective, and there developed a whole arsenal of weapons, in addition to credit policy pure and simple, designed to mitigate depression or to promote recovery from depression.

In a system of national economic controls such as developed in the 'thirties, a stock of international currency available for the settlement of discrepancies in balances of payments is useful mainly as a "buffer" giving each individual country a certain freedom of action, an "international margin," enabling a country, for instance, to undertake domestic recovery measures without too much restraint from external factors or to insulate itself for a time from the effects of depression abroad and yet to enjoy the advantage of stable exchanges. If there is a general need for such a buffer and the need is not adequately met, a system of stable exchanges has only one alternative to offer: a reduction in the volume of international business through trade restriction or deflation.

In this sense the stock of international currency can be too small. But can it not be too large? Is there no danger of inflation?

The most serious cases of inflation during the inter-war period were those that occurred in the early 'twenties in certain parts of Continental Europe. The causal factors were many and various, but an excess of international currency was not one of them. There is, in fact, no known instance of this type of inflation having resulted simply from too large a reserve of foreign means of payment. The cover regulations, as we have seen, have never set up a *maximum* reserve ratio; and in any case, as we shall see in Chapter IV, they have generally not had any very marked effects on domestic money supplies. It would therefore be unrealistic to suppose that domestic credit is bound to vary in direct proportion to international liquidity. A world-wide inflation is conceivable without any increase in the total volume of international currency.

But if there is too much international currency, would individual countries not want to spend it, thus driving up prices in the rest of the world? This might happen immediately if the spending countries acted as entities. A free-market economy can "spend" its international currency only by making it more profitable for traders to import goods from abroad and less profitable to export.¹ Apart from a lowering of trade barriers, that can be done through monetary expansion at home; and if this expansion were to go beyond the point at which any general unemployment of productive resources is absorbed, the result would be a cumulative rise in prices. Thus a free-market econ-

¹ Even though a country may be predominantly a free-market economy, it may still act as an "entity" to some extent. Thus the Swedish Government in 1937 acquired some gold from its central bank and spent it on certain foreign raw materials which it wished to store as a reserve for emergencies.

omy, before it could spend its international cash reserves and so create inflation abroad, would first have to create inflation at home.

The theoretical possibilities are obvious; but how have countries actually behaved? No simple generalization is possible; it is necessary to distinguish between different types of countries. In the first place, there were some, particularly among the wealthy industrial creditor nations, who during the period under review suffered from unemployment and in consequence were more anxious to have export surpluses in order to stimulate home activity, rather than create import surpluses to get rid of excessive gold reserves. They were most often unable to achieve and maintain a level of national investment and income corresponding to full employment, a level which they would no doubt have welcomed for its own sake and not merely for the sake of reducing their international liquidity. When they came near to achieving it, as in 1928/29 and 1936/37, speculation in certain markets created a great fear of inflation and a readiness to adopt restrictive measures. In view of this fear of inflation, which is a natural one particularly in the highly organized communities we are considering, and in view of the increased desire for economic stability, it is generally by no means certain that they should wish to inflate their national income beyond the level corresponding to good employment, simply in order to exchange their excess reserves of international currency for commodity imports. Under these conditions it is only in a limited sense that international liquidity is an expansive factor: if a country is unable or unwilling to produce an export surplus except in exchange for liquid reserves, the existence of such reserves in the rest of the world may enable it to achieve some expansion in national income and employment by way of the export surplus.

But these considerations, in so far as they hold good at all, hold good for only a small part of the world's population. Just as economic advance within a given country tends in the course of time to create a desire for more stability and security rather than further progress, so different countries at any given time may attach very different values to stability as compared with progress. A buffer stock of international currency may serve as a means for an individual country to attain greater stability. But vast sections of the world may have a far greater desire to raise their living standards than to stabilize the existing conditions; for them an international buffer stock may well seem a luxury; and at the same time their social fabric may be less vulnerable to inflation than in the industrial creditor countries where incomes are more unevenly distributed and money contracts more widespread.

We observed earlier that agricultural-exporting countries have a relatively large need for external currency reserves since their balance of payments is liable to wide fluctuations. But most of these countries are relatively poor and have therefore usually been anxious to make

the fullest possible use of their foreign receipts. In the conflict between the demands of stability on the one hand and immediate development on the other, the latter have usually prevailed; and it is only the wealthier of these countries—the Argentine, for example—that were prepared to adopt the buffer mechanism on any extensive scale during the period here reviewed. The “inflationary bias” which may be detected in the history of many primary producing states may have been due to many reasons; but it certainly suggests that these countries have not always been willing to leave their external reserves unused merely in order to stabilize their balance of payments. By inflating the domestic money demand and price-level they have been able to attract additional imports and so “live beyond their income” as long as they had any international cash reserves left.

What we have said in regard to poor and relatively backward nations applies equally to impoverished or devastated countries anxious to repair the ravages of war and to recover the standard of living to which they had become accustomed in peace-time. Here again the requirements of stability are liable to clash with those of progress in the sense of reconstruction. Thus certain impoverished countries in Continental Europe after 1918 made use of their last remaining gold reserves to replenish their working stocks and so contributed to drive up the world market prices of many staple products for which, incidentally, countries such as the United Kingdom and the United States were also competing at the time. Eventually the currencies of the impoverished countries were stabilized, in most cases with the aid of foreign loans. But this in itself did not change the underlying situation. There was a continued demand for capital goods and a continued desire to restore pre-war living conditions, and in these circumstances domestic credit could hardly fail to expand on the basis of the borrowed reserves of foreign currency. Especially the “stabilization loans” properly speaking, as they were not earmarked for any specific investment projects, served ultimately in part to finance a general increase in consumption. Such reserves as had not been absorbed by real investment or consumption in these countries were to a large extent swept away by the international liquidity crisis of 1931.

In seeking an answer to a general question we have inevitably been led to discuss the problems of individual countries or groups of countries and thus to anticipate matters that will be considered more fully in Chapter IV. It is indeed clear that we have reached the limitations of the “global” approach adopted in the present chapter. Yet the preceding review of special cases seems to suggest a general conclusion. It is not international liquidity as such that is liable to create inflationary disturbances when there is too much of it. International liquidity is in itself a relatively passive factor. The active causes of disturbance lie rather in the distribution of wealth among nations and the conditions of economic progress in general; and in the capital

needs of the poorer nations in particular. If those needs are not met by other means, there may arise an irresistible tendency to meet them as far as possible by the surrender of external monetary reserves, with or without domestic inflation in the countries concerned; and this may seriously distort the international currency system or limit its area of effective operation to a restricted group of countries. Thus there is no doubt that the sudden decrease in foreign lending at the end of the 'twenties shares some of the responsibility for the subsequent breakdown of the international monetary system. We shall revert in Chapter VIII to the crucial importance of international investment for the functioning of the international currency mechanism.

Certainly the enormous increase in the gold supply during the 'thirties can scarcely be said to have caused a world-wide inflation, in spite of the direct income-generating effects which the increase in gold output (as distinct from the mere revaluation of pre-existing stocks) produced in the gold-mining countries. That supply, however, came to be more and more unevenly distributed, being concentrated to an increasing extent in the United States. The huge gold stock acquired by the United States, though conceivably it could have been expended again, proved to be practically withdrawn from circulation as an international means of settlement during that period. In such circumstances the distinction between the total quantity of gold and its distribution evidently becomes somewhat artificial. Gold that is more or less permanently absorbed in large amounts by one country may for the rest of the world be much the same as if it were non-existent.

Changes in the distribution of international currency reserves arise through discrepancies in the balance of payments; and if one country's reserve is persistently growing too large or too small, that country would need to take measures (such as exchange-rate adjustments) designed not merely to bring its balance into equilibrium, but further to create, for a time, a deficit in place of the previous surplus or a surplus in place of the previous deficit, so as to reverse in some degree the previous change in the reserve position. But if in fact a persistent and considerable shift in reserves has been allowed to occur in the past, maldistribution is a *fait accompli* which it may be difficult or impracticable to reverse by methods suitable for dealing with current disequilibria in balances of payments.

The gold exchange standard, which will be considered in the next chapter, was adopted in the 'twenties mainly because the total supply of gold was believed to be too small. From what has just been said it is clear that a similar situation may arise if gold, though sufficient in the aggregate, has come to be too unevenly distributed.

CHAPTER II

THE GOLD EXCHANGE STANDARD

AMONG the various schemes and proposals which repeatedly crop up in discussions of monetary reform, one that has enjoyed a wide appeal is the idea of an international currency system with exchange rates stable, as under the gold standard, but with liquid foreign balances constituting the international means of settlement and the international monetary reserves. Gold, it has been suggested, could be dispensed with in such a system not only as a means of international payment but also as a standard of value, especially if the currency or currencies in which the reserves were held were maintained reasonably stable in terms of goods and services.

Monetary history has furnished many examples of the exchange standard principle. Indeed, the practical application of this principle must find a place in any account, however condensed, of international monetary relations during the inter-war period. The gold standard that was "restored" in the 'twenties was in the main a gold *exchange* standard. But an exchange standard need not be a *gold* exchange standard; the Sterling Area which emerged from the currency chaos of the great depression in the 'thirties, and which will concern us in the next chapter, is another important example of the exchange reserve system.

I. ORIGIN AND GROWTH

The Recommendations of the Genoa Conference.

The adoption of a Gold Exchange Standard was officially recommended by the Genoa Conference, which met in the spring of 1922 to consider the problems of financial reconstruction. This recommendation was based on the view that there existed a shortage of gold, due both to a decline in current supply and to an actual or prospective increase in demand for monetary purposes.

The world output of gold declined by about one-third from 1915 to 1922 (*cf.* Appendix I) as a natural result of the general rise in prices during and after the war, which entailed a rise in gold-mining costs, and which was not accompanied by a corresponding rise in the price of gold.

At the same time, it was feared that a return to the gold standard would lead to a scramble for gold, pushing up the commodity value of gold through competitive deflation.

The Financial Commission of the Genoa Conference, presided over by Sir Robert Horne, the British Chancellor of the Exchequer, there-

fore included the following resolution among the "Currency Resolutions" of its final report:

"Resolution 9. These steps [balancing of budgets; adoption of gold as a common standard; fixing of gold parities; cooperation of central banks, etc.] might by themselves suffice to establish a gold standard, but its successful maintenance would be materially promoted . . . by an international convention to be adopted at a suitable time. The purpose of the convention would be to centralize and coordinate the demand for gold, and so avoid those wide fluctuations in the purchasing power of gold which might otherwise result from the simultaneous and competitive efforts of a number of countries to secure metallic reserves. The convention should embody some means of economizing the use of gold by maintaining reserves in the form of foreign balances, such, for example, as the gold exchange standard or an international clearing system."

In Resolution 11 of the report, various proposals were made to serve as a basis for the convention contemplated in Resolution 9. Besides stressing the need for balanced budgets, fixed gold parities, free exchange markets, etc., Resolution 11 contained the following provisions:

"1. . . . The maintenance of the currency at its gold value must be assured by the provision of an adequate reserve of approved assets, not necessarily gold.

"2. When progress permits, certain of the participating countries will establish a free market in gold and thus become gold centres.

"3. A participating country, in addition to any gold reserve held at home, may maintain in any other participating country reserves of approved assets in the form of bank balances, bills, short-term securities, or other suitable liquid resources.

"4. The ordinary practice of a participating country will be to buy and sell exchange on other participating countries within a prescribed fraction of parity of exchange for its own currency on demand.

"5. The convention will thus be based on a gold exchange standard. . . ."

The proposed convention failed to materialize; but the influence of the Genoa resolutions was nevertheless considerable.

Pre-War Antecedents of the Gold Exchange Standard.

Before proceeding to show the practical effect of these recommendations, it may be well to observe that the gold exchange system was by no means invented at Genoa. It had been practised in many cases before 1914. One example commonly quoted is the arrangement

by which the exchange between London and Edinburgh was regulated in the second half of the 18th century. Another example is the convention concluded in 1885 between the central banks of Denmark, Norway and Sweden.¹ Of greater historical importance was Russia's policy, adopted in 1894, by which exchange reserves initially acquired by loan were held abroad—at first in Berlin and later also in other centres—and the government stood ready to buy and sell bills on the centres in question at fixed rates of exchange. The success of the Russian experiment was widely noticed, and a short time later Austria-Hungary established a similar system.

Even in countries on the full gold standard, central banks prior to 1914 were in the habit of holding a certain amount of foreign exchange in addition to gold. In 1913 fifteen European central banks² together held about 12% of their total reserves in the form of foreign exchange. In 1925 the percentage of foreign exchange in the total gold and exchange reserves of twenty-four European central banks, as shown in Appendix II, was 27% ; and in 1928 it rose to 42%. Clearly the holding of foreign exchange by central banks was on the whole much less extensive before 1914 than it became later. It was the existence of a large *private* fund of mobile balances—it was the constant flow of equilibrating short-term capital transfers effected by commercial banks, traders and arbitrageurs in response to small changes in exchange and interest rates—which prior to 1914 created conditions similar to exchange standard arrangements and reduced the need for gold movements. After the monetary upheavals of the war and early post-war years, private short-term capital movements tended frequently to be disequilibrating rather than equilibrating: a depreciation of the exchange or a rise in discount rates, for example, instead of attracting short-term balances from abroad, tended sometimes to affect people's anticipations in such a way as to produce the opposite result. In these circumstances the provision of the equilibrating capital movements required for the maintenance of exchange stability devolved more largely on the central banks and necessitated a larger volume of official foreign exchange holdings.

The examples just given of the pre-1914 gold exchange system were confined to Europe. But it was outside Europe that the system played its most important part. India, ever since 1898, has provided

¹ Each of these banks was authorized by its statutes to hold balances with the two others, and to count these balances as part of the reserve on which the issue of notes was based. The Convention of 1885 provided *inter alia* that "each of these three banks shall open a current account with each of the others; on this account they may issue cheques payable at sight, even if this involves an overdraft; all sums may be paid in to their respective credits. No interest will be charged on credit or debit balances. . . . Debit balances must be paid up at the request of the creditor bank." See A. E. Janssen, *A Note on the Plan for an International Clearing House* (League of Nations, Provisional Economic and Financial Committee, 1922), page 6.

² Austria-Hungary, Belgium, Bulgaria, Denmark, France, Germany, Greece, Italy, Netherlands, Norway, Roumania, Russia, Spain, Sweden, Switzerland.

the classic instance of the working of an exchange standard. The "Gold Standard Fund" introduced by the United States in the Philippine Islands in 1903 is also a well-known case. The Argentine and Japan operated what amounted in practice to a sterling exchange system in the years before 1914. Outside Europe the application of the exchange standard principle made little further progress in the 'twenties. The spread of the gold exchange standard on the lines recommended by the Genoa Conference was, in the main, a European development.¹

Modification of Central Bank Statutes.

"Adoption of the gold exchange standard" meant, in the first instance, adoption of statutes permitting central banks to hold foreign exchange instead of gold in their legal reserves against notes in circulation or against notes and sight deposits. The first few years after the Genoa Conference were a period of great activity in central banking legislation, and the new statutes adopted were strongly influenced by the Genoa resolutions. This was true in particular of the countries that restored their currencies with the assistance of the Financial Committee of the League of Nations, such as Austria (1922), Danzig (1923), Hungary (1924), Bulgaria (1926), Estonia (1927), Greece (1928), where the central banks were authorized to hold the whole of their reserves in foreign bills and balances convertible into gold. Italy (1927) was among the countries that took a similar course. In a number of other countries, however, and especially in the later 'twenties, the statutes adopted tended to depart from this model, and required the maintenance of a certain proportion of gold in the total legal reserve of gold plus foreign exchange. The proportion was fixed at 75% in Germany (1924), 33% in Albania (1925), 75% in Belgium and Poland (1927), and 70% in Roumania (1929).

Altogether, the countries whose central banks at some time during the period 1922-1931 were entitled to hold their legal reserves partly or wholly in foreign exchange, form quite a long list, including Albania, Austria, Belgium, Bolivia, Bulgaria, Chile, Colombia, Czechoslovakia, Denmark, Ecuador, Egypt, Estonia, Finland, Germany, Greece, Hungary, Italy, Latvia, Peru, Poland, Portugal, Roumania, Spain, Uruguay, U.S.S.R., Yugoslavia. In addition, there were a number of countries which practised an exchange standard but which had not yet established a central bank during this period: for instance, India, New Zealand, Argentine, Venezuela.

It would be misleading to overemphasize the role of central banks' legal reserve regulations in the working of the exchange standard system. Central banks which had the right to hold foreign exchange

¹ Cf. William Adams Brown, Jr., *The International Gold Standard Reinterpreted, 1914-1934* (National Bureau of Economic Research, 1940), p. 748.

in the legal reserve did not always make use of this right and preferred sometimes to hold gold. On the other hand, banks which did not have this right sometimes held large amounts of foreign exchange outside the legal reserve. The central banks of Japan, Australia, Norway, for example, were allowed to count nothing but gold as legal cover; yet they held considerable foreign balances and were (rightly) regarded as practising the exchange standard system in fact.¹

If the legal reserve requirements of central banks had exercised an important influence on domestic credit policies, then the legal status of foreign exchange holdings might have made an important difference. But, as will be shown in Chapter IV, the practical effect of the reserve requirements upon national credit policies in the period under review was, on the whole, not very striking. On the other hand, changes in central banks' foreign assets may occasionally have influenced domestic credit policy even if they formed no part of the legal reserve.

Whatever the legal provisions, some central banks undoubtedly found it at times advantageous, in meeting temporary fluctuations in the balance of payments, to operate a foreign exchange reserve outside the legal cover, especially when it was thought that changes in the assets held as legal cover might attract undue attention and provoke undesired psychological repercussions.

In the preceding paragraphs, the question whether the central bank has the power to acquire foreign exchange at all was not even put; such power was taken for granted. The curious case of France shows that it cannot be taken for granted. Prior to August 7th, 1926, the Bank of France was not entitled to purchase gold or foreign exchange at anything but the old pre-war parities. A Law of August 7th, 1926 empowered the Bank to acquire foreign exchange and gold at market rates and to issue notes against these assets beyond the legal maximum limit of the note circulation. The depreciation of the franc reached its low point in July 1926, and a *de facto* stability was maintained from December 1926 onwards. The Bank acquired in fact enormous amounts of foreign exchange. When the legal stabilization of the franc was carried out in June 1928, the Bank was not permitted to count this foreign exchange as part of the 35% minimum cover against notes and sight liabilities; and the Law of August 7th, 1926 was repealed, though the Bank was not prevented from continuing to hold the exchange acquired up to June 1928. France's *de facto* adherence to the international exchange standard thus lasted less than two years. The important role played by France in the breakdown of the system will make it necessary to take up her case in more detail at a later point.

¹ In Japan the foreign exchange transactions of the authorities were conducted, and the foreign balances held, not by the bank of issue but by the Yokohama Specie Bank.

Sources of Central Banks' Exchange Holdings.

After the legal provisions had been made allowing a bank of issue to purchase foreign assets or to count them as part of its legal reserve, the next task was to create conditions enabling the bank actually to acquire such assets. There were several ways in which this was done.

In the first place, various countries received foreign stabilization or reconstruction loans, mainly from the United States and the United Kingdom, the proceeds of which passed at least in part into the hands of the central banks. Austria and Hungary, for example, were able to raise such loans (amounting to about \$100 million and \$45 million respectively) under the auspices of the League of Nations. Germany obtained a stabilization loan of \$200 million under the Dawes Plan, Belgium obtained a loan of \$100 million, Poland one of \$50 million. Italy received a stabilization credit of \$125 million from a group of central banks led by the Bank of England and the Federal Reserve Bank of New York.

Secondly, efforts were made by some countries to acquire foreign reserves by improving the current balance of payments; and in some cases this was attempted through a deflation of costs and prices. Such deflation may have tended to improve the trade balance, but its main influence on exchange reserves operated more frequently through the capital account of the balance of payments. Deflation involved high interest rates, thus tending to attract funds from abroad. Moreover, foreign capital was attracted at times by the currency appreciation which frequently accompanied the deflation preceding the legal stabilization. Especially when the monetary authorities made known their intention to stabilize the exchange at a level higher than the current market value, or when such an intention was assumed to exist, there was an incentive for bull speculation in the currency concerned. Italy, for instance, experienced a considerable capital inflow of this speculative character during the eighteen months preceding the *de jure* stabilization in December 1927, when the lira was steadily appreciating. Similar movements of speculative funds were observed in Denmark and Norway in the two or three years of exchange appreciation prior to January 1927 and May 1928 respectively, when the two countries legally restored the pre-war gold parities of their currencies.

Even apart from such cases of deflation and exchange appreciation, interest differentials during the years 1925-28 generally provided a sufficient inducement for large amounts of short- and long-term capital to move, from New York and London in particular, to the countries adhering to the gold exchange standard. To the extent that the individual borrowers needed funds in domestic currency, it was the banking system in these countries that came to hold the proceeds of private foreign loans in the form of liquid foreign exchange reserves.

A further source of foreign exchange, as demonstrated particularly in the case of France, was the repatriation of private domestic capital funds, combined to some extent with an improvement of the current balance of payments through undervaluation of the currency. The repatriation of capital to France set in as soon as the exchange depreciation was arrested; it continued after *de facto* stabilization was achieved; and it was stimulated by the "profit" created by the devaluation on the conversion of foreign balances into domestic currency and by the fear that this "profit" might be reduced through an appreciation of the currency.

2. FUNCTIONING AND BREAKDOWN

Fluctuations in Foreign Exchange Reserves Prior to 1931.

The operation of the gold exchange system is illustrated in Appendix II showing the year-to-year changes in central banks' foreign exchange and gold holdings in 24 countries during the period 1924-1932. The last two years of this period are marked by a wholesale liquidation of foreign exchange reserves, reflecting the complete collapse of the gold exchange standard. The liquidation period will be dealt with later. For the moment we may briefly note certain features of the system in the earlier and more "normal" years.

One feature worth noting is the number of countries where the gold stock was kept unchanged, and where consequently changes in the balance of payments so far as they affected the central bank showed themselves exclusively in the foreign exchange reserve. In Finland, as may be observed from Appendix II, the gold stock remained constant throughout the period 1924-1932, while the foreign exchange reserve, which was much larger than the gold stock, underwent wide fluctuations. A constant gold stock and a varying exchange reserve may also be observed in Lithuania (up to 1930), in Portugal (from 1926 to 1931), and in Latvia and Norway (up to 1931). This fact is particularly remarkable in the case of Norway and Lithuania, where foreign assets were not eligible as cover against note circulation or sight deposit liabilities. Of certain other countries such as Sweden, Bulgaria, and Yugoslavia, though their gold reserves did not remain absolutely unchanged, it is likewise true to say that the fluctuating portion of their international monetary reserves was made up predominantly of foreign liquid assets.

In the Netherlands and in Greece, as shown in Appendix II, a part of the gold stock was converted into foreign exchange in 1925 and 1928 respectively. In other cases, however, such substitutions as occurred were mostly in the opposite direction. As early as 1925, Germany shifted a large part of her reserves from foreign exchange into gold. Hungary did the same in 1926. This tendency away from the gold exchange system was reinforced in 1928, when Italy and Poland

converted some of their foreign exchange into gold. Even where such large or sudden shifts did not take place, the proportion of foreign exchange in the total reserves was in some cases allowed gradually to decline, as in Austria (from 1925), Czechoslovakia (from 1927) and Yugoslavia (from 1924 onwards).

In Germany, it will be remembered, the central bank was not legally qualified to hold more than one-fourth of its statutory reserve in the form of foreign exchange. Foreign assets held outside the statutory reserve accounted for most of the fluctuations in the bank's foreign exchange holdings. The share of foreign exchange in the statutory reserve fell indeed far below 25% in the years after 1926. In 1928 the proportion of *all* foreign assets of the Reichsbank to its total gold and exchange holdings fell to the low level of 16%, compared with 61% in 1924. This sharp drop was only partly due to the conversion of foreign balances into gold in 1925. When the bank's total reserve increased in 1926, that increase was taken exclusively in the form of gold; when an outflow occurred in the following year, the reduction affected exclusively the foreign exchange reserve. The proportion of foreign exchange declined further in the spring of 1929. When after the signature of the Young Plan a temporary resumption of the capital influx occurred in the second half of 1929, the bank took advantage of this to replenish its foreign exchange holdings not only within but also outside the statutory reserve, and so to recover a margin of free play between the fluctuations of the balance of payments and the internal currency supply.

But the size of the international monetary reserve in the hands of the Reichsbank was not only a function of the balance of payments. It depended largely also on the behaviour of the private money market in Germany and particularly on the behaviour of the commercial banks. These banks, as a result of Germany's foreign borrowing, kept substantial liquid resources abroad as working balances. Variations in their preference for foreign balances as against domestic central bank funds—determined by changes in interest differentials and exchange rates, by fluctuations in trade activity or by the state of confidence—were an important factor influencing the movement of the Reichsbank's exchange reserve and the size of the domestic credit base. Similar conditions prevailed in other European countries that were borrowing heavily in New York and elsewhere during the period under review.

The striking increase in Italy's central exchange reserve in 1926 and 1927 was largely due, as mentioned before, to a speculative inflow of funds induced by the upward tendency in the value of the lira. After the stabilization in December 1927, the exchange reserve was steadily reduced. A part of the decline, however, was due to purchases of gold, especially in 1928.

In spite of the wide fluctuations observed in individual countries,

the proportion of foreign assets in the total central-bank reserves of 23 European countries, excluding France, was surprisingly steady in the six years prior to 1931. As may be seen from the last line of the table below, the ratio varied only slightly between 35 and 40%. It is the inclusion of France that produces the wide fluctuations in this ratio as calculated for the total of the 24 countries shown in Appendix II.

Foreign Exchange and Gold Reserves of European Central Banks
\$(000,000's)

(For the figures for individual countries, see Appendix II.)

End of:	1924	1925	1926	1927	1928	1929	1930	1931	1932
<i>Total (24 countries)</i>									
Foreign Exchange	845	917	1159	2145	2520	2292	2300	1216	505
Gold	2281	2367	2568	2903	3490	3841	4316	5273	5879
Total	3126	3284	3727	5048	6010	6133	6616	6489	6384
Foreign Exchange as % of Total	27	28	31	42	42	37	35	19	8
<i>Total Excluding France (23 countries)</i>									
Foreign Exchange	831	904	1043	1295	1233	1271	1273	374	329
Gold	1571	1656	1857	1949	2236	2208	2217	2574	2622
Total	2402	2560	2900	3244	3469	3479	3480	2948	2951
Foreign Exchange as % of Total	35	35	36	40	36	37	37	13	11

France on the Gold Exchange Standard.

At the end of 1928, France alone accounted for more than half of the total of central-bank exchange holdings shown in the first line of the summary table above. The role of France in the rise and decline of the gold exchange standard clearly demands a more detailed consideration.

For several years prior to July 1926, France experienced a flight of capital, which depreciated the exchange far below the level corresponding to domestic costs and prices. There were practically no gold exports, the Bank of France preferring to keep its relatively modest gold reserve intact. It was the surplus in the current balance of payments which arose as a result of the exchange depreciation that provided the means by which the real transfer of the flight capital was accomplished.

In July 1926, drastic measures were initiated to balance the budget and to restore confidence. The value of the franc recovered from less than 2½ U.S. cents in July to nearly 4 U.S. cents in December 1926, at which level it was stabilized, at first *de facto* and later, in June 1928, *de jure*.

In August 1926, as mentioned earlier, the Bank of France was granted the right to purchase gold and foreign exchange at market

rates. During the next four or five years, in order to prevent the franc from appreciating above the level established in December 1926, the Bank had to purchase enormous amounts of gold and foreign assets. From August 1926 to the date of the legal stabilization—June 25th, 1928—the Bank's foreign exchange acquisitions, amounting to over 26,000 million francs (or over \$1,000 million at the current rate of exchange), by far exceeded its purchases of gold, amounting to about 10,000 million francs. After that date, its gold stock rose steadily up to 1932. Under the monetary law of June 25th, 1928, the Bank was no longer permitted to buy foreign exchange. Just before the legal stabilization, the Bank had bought large amounts of foreign exchange for forward delivery. These forward contracts matured in the second half of 1928, raising the total foreign exchange holdings of the Bank to 32,800 million francs (or nearly \$1,300 million) at the end of the year. There was some doubt as to whether, under the law just mentioned, the Bank was justified in thus increasing its holdings. The amount in question was therefore converted into gold, and the foreign exchange reserve fell back to the previous level of 26,000 million francs in June 1929. At that level it remained virtually unchanged for over two years, that is until the second half of 1931, when the Bank started the liquidation process which practically wiped out its foreign exchange reserve in the two following years.

It is necessary to distinguish clearly between the two principal sources of the gold and exchange holdings acquired by the Bank after August 1926, even though the data permit of no sharp separation in the actual statistics. There was, in the first place, the "repatriation of capital." The desire of French investors to repatriate their funds was natural, in view of the temporary and abnormal character of the preceding capital export. In fact, however, in the then existing condition of the balance of payments, the "repatriation" meant essentially that the total of foreign assets held by the French public and banking system remained unchanged, but that an increasing proportion of this total was transferred from the hands of private banks and capitalists into the ownership of the Bank of France.

The second factor at work tended to increase the *total* of French foreign assets: it was the "undervaluation" of the franc, the function of which, prior to July 1926, had been to effect the real transfer of flight capital abroad. This undervaluation, though appreciably reduced through the recovery of the franc in the latter half of 1926, persisted in a substantial degree after December 1926, creating as it were an automatic export of capital through a surplus in the current balance of payments. Having lost a large part of her long-term foreign assets through the Russian revolution, France was not prepared to resume foreign long-term investment on any considerable scale, and so the

current surplus went in the main simply to increase the country's gold reserves and liquid foreign balances.

A third source may have operated at certain times to swell the gold and exchange holdings of the Bank of France: namely, imports of foreign speculative funds. But these do not, in retrospect, seem to have been nearly as important as they appeared to certain contemporary observers (including the authors of the Bank's annual reports for 1927 and 1928). Most of the speculative positions built up by foreigners during the months preceding the legal stabilization were rapidly and easily liquidated after June 1928.¹

Foreign speculation played, however, an important part in the reasons given by the Bank for converting some of its foreign exchange into gold. In its annual reports for 1927 and 1928, the Bank argued that its purchases of foreign balances and bills created an abnormal condition of liquidity in the centres where they were held; that it thus itself provided the funds used for speculative purchases of francs; and that only the conversion of its foreign assets into gold could stop the vicious inflationary circle.

But insofar as the Bank's foreign exchange purchases represented "repatriation of capital" they constituted in fact simply a redistribution inside France in the ownership of foreign assets. The fact that bills or bank deposits in London, for example, passed from the ownership of a private Frenchman into the ownership of the Bank of France cannot have had appreciable effects, if any, on market conditions in London. It is difficult to see, more particularly, how it could have increased the financial facilities for exchange speculation in London. True, if the private Frenchman's foreign assets consisted of long-term securities, then—since the only foreign assets the Bank of France was prepared to hold were short-term bills and bank balances—the "repatriation" of French capital would have meant a shift of funds from the long-term to the short-term market in London; but the resources of the London market as a whole could hardly have been substantially affected. Besides, the private French assets in London or New York were in fact mostly held in a highly liquid form, as they had come there in search of security rather than profit.

To the extent that the Bank of France's purchases of foreign bills and balances reflected the "automatic" capital export resulting from the undervaluation of the franc, there was likewise a change in the ownership of short-term bills and bank deposits in, say, London; but this time from *British* ownership into the ownership of the Bank of France. How this could have had an inflationary effect in London is

¹ Even after the *de facto* stabilization, from December 1926 to June 1928, the chance that the franc might in the end be legally stabilized at a level higher than the current market value was by no means negligible. There were many politicians and financiers strongly advocating such a course. There were in consequence recurrent waves of bull speculation in the franc, the last of which—in May 1928—was particularly violent.

difficult to see. The effect is more likely to have been deflationary, especially in the case of bank deposits passing from the active domestic circulation into the inactive holding of the Bank of France.

The French funds that had taken flight and were temporarily held abroad represented an amount of finite magnitude. Their transfer to the Bank of France—the process of “repatriation”—was bound to come to an end sooner or later. There was no such definite limit to the current surplus in the balance of payments arising from the undervaluation of the franc. How long this surplus was to continue depended on the speed and strength of the corrective forces tending to restore equilibrium in the balance of payments. One equilibrating factor, indeed, was to some extent neutralized. As will be shown in Chapter IV (Section 2), the increase in the gold and exchange reserve of the Bank of France was in part offset by a reduction in the Bank's domestic assets and an increase in its deposit liabilities to the Government, so that the growth of the gold and foreign exchange reserve did not produce an equivalent expansion in the note circulation and in private sight deposits at the Bank. The adjustment of a country's balance of payments, however, does not depend solely on changes in the quantity of domestic currency and credit in accordance with changes in international currency reserves; it also depends largely on changes in income and effective demand directly connected with the balance of payments in a manner which will be indicated in Chapter IV, Section 5. Briefly, the low exchange value of the franc tended to divert expenditure of Frenchmen as well as foreigners from foreign goods and services to French goods and services, and this led to an increase in aggregate income and demand in France tending to bring the international accounts into balance. In fact the French surplus in current transactions disappeared after 1930; the franc ceased to be undervalued. The effect of the undervaluation on economic conditions had been favourable in France, but unfavourable abroad; the French balance of payments no doubt contributed, though probably to a minor degree, to the forces making for depression in the rest of the world at the turning-point of the business cycle in 1929-30.

After June 1928, as stated before, the Bank of France was no longer entitled to buy foreign exchange. In its annual reports for 1929 and 1930, written at a time when it was no longer possible to justify the purchase of gold in place of foreign exchange by a desire to curb speculative and inflationary tendencies abroad, the Bank referred to its gold imports as a natural result of the automatic gold standard mechanism. In the latter part of 1931, the Bank began to liquidate its foreign bills and balances. It should be noted that nearly half of the reduction shown in the Bank's foreign assets during 1931 represents the exchange loss incurred on its sterling assets. In 1932 the conversion of foreign exchange into gold continued at an accelerated pace. In 1933 the foreign exchange reserve was reduced

to an insignificant amount; but in that year the gold stock also suffered a reduction, the first of a long series of reductions.

In its annual reports for 1931 and 1932 the Bank declared that ever since 1928 its desire and intention had been to convert its foreign assets into gold, and that it had refrained from doing so only out of regard for the "monetary difficulties of other countries."¹ This indeed was the essence of the French position: from the outset, France was a reluctant member of the gold exchange system; she regarded her partial adhesion to it as an essentially temporary makeshift and longed to give her currency "an exclusively metallic foundation."²

The Breakdown of the Gold Exchange Standard.

The fate of the gold exchange standard was sealed when France decided in 1928 to take nothing but gold in settlement of the enormous surplus accruing to her from the repatriation of capital and from the current balance of payments. The French gold imports certainly aggravated the pressure of deflation in the rest of the world and especially in London. In London, the pressure became unbearable in the end, and the gold parity of the pound was abandoned. When in the summer of 1931 French capitalists and commercial banks became nervous about their sterling assets and anxious to "repatriate" them, the Bank of France could not take over these assets and hold them in its exchange reserve; they had to be turned into gold. Even without the law of June 1928 it may be that the Bank, sharing the public's nervousness, would still have demanded gold. In certain other countries which were also repatriating their sterling balances at that time, central banks were legally free to acquire these balances, but in fact preferred gold to sterling. Hence the heavy gold losses of the Bank of England in the three months preceding the suspension of the gold standard on September 21st, 1931.

The breakdown of exchange stability led in turn to a further scramble for gold through the liquidation of previously accumulated foreign exchange reserves of central banks, since the possibility of losses arising from exchange-rate fluctuations rendered the holding of foreign balances risky. Indeed the withdrawal of balances from the United Kingdom after September 1931 was often imposed on central banks by their statutes, requiring them to hold their exchange reserves exclusively in gold standard currencies. To remain eligible as legal cover, these balances therefore had to be converted into gold or into a gold standard currency. As the dollar was also under pressure, a number of countries—especially in eastern and south-eastern Eu-

¹ Cf. *Annual Report for 1931*, p. 9: the Bank . . . "deemed it preferable not to increase through its actions the monetary difficulties of other countries. By conserving the major part of the foreign assets—and notably of the pounds sterling—that it held, the Bank has contributed in a very large measure, during the last three years, to maintaining the stability of the British currency."

² Bank of France, *Annual Report for 1932*, p. 5.

rope—transferred their reserve balance from London to Paris. Paris, in fact, became for a time a minor gold exchange centre for such countries as Poland, Czechoslovakia, Bulgaria, etc., especially after April 1933 when the dollar, too, ceased to be eligible for reserve purposes.

The crisis of September 1931 was followed by a withdrawal of balances from the United States as well as from the United Kingdom. In the two years 1931 and 1932, the monetary gold stock of the United States was reduced from \$4,225 to \$4,045 million, or by \$180 million. In the United Kingdom, the net reduction amounted to \$125 million (from \$718 to \$583 million), making a reduction of \$315 million for the two countries together during these years. Over the same period, however, the combined gold reserves of six creditor countries included in Appendix II, namely, France, Belgium, Italy, the Netherlands, Sweden¹ and Switzerland, rose by as much as \$1,929 million (from \$2,943 to \$4,872 million). Thus only a small part of the gold absorbed by these countries came from the two centres where most of their foreign exchange reserves were held. Where did the remainder come from? Though some of it came from current gold production, it is clear that to a certain extent the pressure resulting from the collapse of the gold exchange system was passed on from London and New York to the world's debtor countries, mainly through the abrupt cessation or even reversal of capital movements and through the fall in prices of primary commodities.²

If we separate the 24 countries of Appendix II into two groups—creditors and debtors—we see at once that the conversion of foreign exchange reserves into gold was confined to the six creditor states. From the end of 1930 to the end of 1932 their gold reserves, as shown in the following table, increased by \$1,929 million, while their foreign exchange holdings declined by \$1,331 million. The tendency to replace foreign assets by gold in this group of countries had already become apparent in 1928/29.

The 18 debtor states, as shown in the table below, suffered a heavy reduction in gold reserves as well as in foreign exchange, though the proportionate decline was considerably greater in foreign exchange than in gold. They lost \$366 million of gold in 1931 and 1932. Debtor countries outside Europe lost about \$260 million of gold in this period.

While most of the gold reserves lost by the debtor countries were in effect passed on to creditor countries converting their dollar and sterling balances into gold, the foreign exchange reserves lost by the debtor countries were largely used to repay short-term credits called

¹ Sweden, as a creditor country, is included in this group, even though she was not one of the gold-absorbing countries; her gold reserve actually declined in 1931 (see Appendix II). However, the inclusion or exclusion of Sweden does not appreciably affect the totals given in the text.

² Cf. William Adams Brown, Jr., *op. cit.*, pp. 349 ff.

Central Banks' Foreign Exchange and Gold Reserves
\$(000,000's)

End of:	1928	1929	1930	1931	1932
Total of 6 Creditor Countries included in Appendix II:					
Foreign Exchange	1878	1604	1679	1024	348
Gold	1987	2430	2943	4214	4872
Total	3865	4034	4622	5238	5220
Foreign Exchange as % of Total	49	40	36	20	7
Total of 18 Debtor Countries included in Appendix II:					
Foreign Exchange	642	688	621	192	157
Gold	1503	1411	1373	1059	1007
Total	2145	2099	1994	1251	1164
Foreign Exchange as % of Total	30	33	31	15	13

in by the reserve centres themselves (*i.e.*, mainly New York and London). Just as the granting of private short-term credits by New York and London had supplied the central banks of debtor countries with a large part of their dollar and sterling reserves in the 'twenties, so the withdrawal of those credits in the early 'thirties tended to wipe out these reserves. It is clear that when debtor countries used up their foreign exchange reserves for payments to the centres in which the reserves were held, there occurred an extinction and not simply a transfer of central banks' international currency reserves.

Thus the breakdown of the gold exchange standard involved a sharp reduction in the aggregate of international currency reserves not only through the conversion of exchange reserves into gold but also through the absorption of exchange reserves by payments to the reserve centres. The total foreign exchange reserves of the 24 countries included in Appendix II declined by \$1,800 million in 1931 and 1932—that is, by an amount far in excess of the \$1,000 million of gold which came into central bank reserves in the world as a whole from current production and other sources in these two years.

3. MERITS AND DEFECTS OF THE SYSTEM

The liquidation of the gold exchange standard and the scramble for gold which it implied—more especially the large-scale absorption of gold by the countries that later came to be known as the "gold bloc"—gave added strength to the forces of deflation throughout the world. It was chiefly to avoid deflation that the gold exchange standard was recommended at Genoa. As events turned out, the deflation was only postponed: the principle of "gold economy" was abandoned when it was most needed, at a time, namely, when other factors making for depression were coming into play in any case.

The gold exchange standard was often accused of tending to breed inflation.¹ In actual fact, of course, no general rise in prices occurred in the period from 1924 to 1928 when the gold exchange standard was in fairly extensive operation: on the contrary, prices of primary commodities showed a falling trend from 1926 onwards. Yet the charge was perhaps true in a sense, but it betrayed a misconception of the primary object of the system. The gold exchange standard was *intended* to be an anti-deflationary device and therefore in that sense "inflationary." Without it, the shortage of international currency might have led to a general deflation which would have "corrected" the situation through a reduction in the value of international transactions and an increase in the output of new gold. With it, the gold shortage was made good by exchange reserves; gold production could remain lower than it otherwise would have been, and there was thus an "economy of gold" even in the sense of an economy of productive resources engaged in gold mining.

One serious weakness of the gold exchange system was the great variability in the degree to which central banks relied on exchange reserves as against gold. To understand the causes of this variability it is necessary to consider the motives that led individual countries to adopt the gold exchange standard and to adhere to it. The principal motive should have been a realization of the common interest or, in negative terms, the fear of a world-wide deflation. But individual countries were inclined to neglect the external repercussions of their actions; and the threat of a world deflation was, to each of them, a remote and ineffective sanction.

Countries in need of foreign capital could be induced to observe the exchange standard rules by various means of persuasion and pressure exerted by the lending centres. Especially in the countries where post-war monetary reconstruction was carried out with outside assistance, the advice given and the desires expressed by the experts and financiers of the lending countries played an important role in the practical working of the gold exchange standard.

On the other hand, this factor tended to discredit the system in the eyes of certain creditor and also certain debtor countries. The holding of foreign balances instead of gold in the central monetary reserve came to be regarded as damaging to the prestige of a great or even a moderately great nation. It is largely for this reason that the countries whose balances were in absolute amount the most important—including, for instance, France, Germany, Italy, Poland—did not regard their own use of the gold exchange standard as anything but a transitory expedient.²

¹ Apart from numerous French writers, mention may be made of F. Mlynarski, who sharply attacked the gold exchange standard on this ground in his *Gold and Central Banks* (1929).

² Cf. William Adams Brown, Jr., *op. cit.*, p. 789.

Moreover, in certain quarters the gold exchange standard was regarded as merely a British "fad,"¹ or even as a device invented and sponsored by Great Britain to make it easier for her to return to the pre-war parity without the necessary internal adjustments in costs and prices, and to retain her gold reserves. It has been observed² that at the Genoa conference the exchange standard doctrine was propounded mainly by the British delegation.

The only tangible bait offered by the gold exchange standard to its adherents was the interest return obtainable on foreign exchange reserves as opposed to gold. The "heavy expense of the gold standard system"³ in terms of the interest foregone was supposed to render the gold exchange method particularly attractive to the poorer countries. That may have been so; but the argument did not appeal to the national pride of the less poor countries, even though it may have appealed to the accountants of their central banks. In the profit-and-loss returns of central banks interest receipts from foreign bills and balances played sometimes indeed a very prominent part. Thus in 1929 they provided the Bank of France with 65% of its gross profits. How drastic a change the liquidation of its exchange holdings entailed in the Bank's profit-and-loss account may be seen from the following comparison of the position in 1929 with that in 1934 when receipts from foreign assets had fallen to 3% of gross profits:

Francs (000,000's) :	1929	1934
Receipts from foreign assets	1,250	20
Receipts from domestic assets, commissions, etc.	684	547
	<hr/>	<hr/>
Total gross profits:	934	567

The 1920's were a period of relatively high interest rates. In the leading financial centres, 4%, 5% or even more could be obtained from three-month bank bills and similar short-term investments. In 1929 the Bank of France earned an average of 4.6% on its foreign bills and bank balances. Just as the high level of money rates in the 'twenties may have contributed in some degree to the spread and the maintenance of the gold exchange standard, so the sharp decline that took place in 1930 may have tended to weaken people's attachment to it. In London and New York rates of discount on bank drafts or acceptances dropped from over 5% in the summer of 1929 to about 2% in the second half of 1930. In 1931, however, with the onset of the international liquidity crisis, money rates shot up again; yet the inducement of higher interest was powerless to stop the general flight from the gold exchange standard.

¹ Cf. Royal Institute for International Affairs, *The International Gold Problem* (London, 1931), p. 91.

² By Sir Otto Niemeyer, in *The International Gold Problem*, *op. cit.*, p. 90.

³ League of Nations, *Report of the Gold Delegation* (1932), p. 55.

Interest returns became a wholly secondary consideration when stability of exchange rates and confidence in such stability broke down. The depreciation of a currency in which foreign exchange reserves were held meant that these reserves lost some of their value as means of settlement in relation to other countries, even though their power to purchase commodities or to discharge financial obligations in the country in which they were held was not necessarily impaired by the exchange depreciation. The fear of exchange losses was in fact an overpowering motive for the liquidation of foreign reserves and rendered the operation of an exchange standard quite impossible. Besides, the statutes of most central banks, as mentioned before, expressly required that if any exchange standard were practised at all, it should be a *gold* exchange standard; and the liquidation of foreign exchange reserves became at least in some measure compulsory as soon as the currency of a reserve centre ceased to be convertible into gold at a fixed parity.

One criticism which has figured prominently in discussions of the gold exchange standard has still to be considered. It has been asserted that movements in foreign exchange reserves do not operate in the same reciprocal fashion as gold movements. Under the gold bullion standard, according to the traditional view, the country losing gold is forced to deflate and the country gaining gold is induced to inflate, so that the burden of any necessary adjustment is shared and therefore eased. Under the gold exchange standard, it is argued, a country that is gaining or losing foreign exchange reserves may well be obliged to effect the appropriate expansion or contraction of credit; but in the country where these reserves are held nothing happens that would bring into play a reciprocal tendency towards contraction or expansion. This argument calls for three brief comments.

In the first place, whether the country where the reserves are held is or is not directly affected by changes in their volume depends to some extent on the form in which they are held. If they were held in the form of sight deposits with the central bank, such changes would have a strong effect analogous to gold movements, since they would involve additions to or withdrawals from the amount of central bank funds available for the domestic credit base. If the reserves were held in the form of deposits with commercial banks, as was more commonly the case, they would involve shifts of deposits from the active domestic circulation to the inactive holding of the foreign central bank, or *vice versa*; their effects, though in the "right" direction, would obviously be much weaker.¹

¹ Apart from the question of the effects of changes in reserve balances on credit conditions in the reserve centre, it would have been highly desirable in any case to hold such balances at the central bank. Thus the Preparatory Commission of Experts in its *Draft Annotated Agenda* for the Monetary and Economic Conference (League of Nations, 1933, page 16) recommended that in order to secure

But even if it were true that changes in foreign holdings made no difference to credit conditions in the reserve centre, the contrast that is supposed to exist between the effects of gold movements on the one hand and movements in foreign liquid reserves on the other rests largely on a preconceived opinion as to the effects that gold movements ought to have, rather than on an empirical study of the effects they did have in the period under review. It will be seen in Chapter IV that there was a strong tendency for countries to insulate their internal money supply from the influences of the balance of payments. More often than not, gold movements were offset or "neutralized," not always deliberately by any means, but often "automatically"; not always owing to the action but frequently owing to the inaction of the central bank. In Chapter IV it will at the same time be observed that the adjustment of the balance of international payments does not depend as closely as has sometimes been thought on changes in the domestic money supply in the various countries.

Thirdly, the common theoretical charge of a lack of reciprocal adjustment in the gold exchange system loses its force under certain conditions which happened to prevail in reality. Suppose two countries (A and B) hold their reserves in a third (C). If one of them (A) loses reserves to the other (B), there is obviously full reciprocal action between the two, just as if gold had moved; provided of course that the "rules of the game" are observed and that the movement is not neutralized. It may be objected that this is rather a special assumption to make. But it is an assumption that corresponds to the facts. The gold exchange system was not an agglomeration of countries indiscriminately holding each others' currencies. There was a distinct tendency for reserves to be held in a central nucleus (C), even though the nucleus consisted not of one but of two or three countries. In such a system, full reciprocal adjustment of credit and prices can take place between the member countries *inter se*.¹ It is true that between the member countries on the one hand (A, B) and the centre country on the other (C) the adjustment, on the present assumptions, will tend to be unilateral instead of reciprocal. (If prices in the member countries are on the whole appreciably lower than in the centre country, their aggregate foreign reserves and hence their domestic credit base will expand; and *vice versa*.) But this is as it should be. It is part of the centre country's responsibility in such a system to keep its level of prices and employment reasonably stable; it is for the member countries to keep themselves attuned to that level.

"a system more centralized and subject to more effective control . . . foreign exchange holdings in Central Banks should be invested with or through the Central Bank of the currency concerned or with the Bank of International Settlements. This is all the more important, because it is, in our opinion, imperative that Central Banks should have a complete knowledge of all the operations of other Central Banks on their markets."

¹ Cf. J. M. Keynes, *Treatise on Money* (1930), Vol. I, p. 353.

Within the area over which the system operates, and so long as it operates, the centre country need have no anxiety about its own international liquidity, since its own currency is accepted and used as a means of international settlement by the countries adhering to the system. In return, it is of vital importance for the centre country to keep up its demand for imports and/or its foreign lending, so as to maintain the liquidity of the member countries. The decline of economic activity in 1929-32 was far greater in the United States than in the rest of the world, and was reflected in a sharp drop in United States imports which, together with the cessation of long-term lending and the recall of short-term credits, severely depleted the dollar reserves of most of the member countries.

In fact, however, the nucleus of the gold exchange system consisted of more than one country; and this was a special source of weakness. With adequate cooperation between the centre countries, it need not have been serious. Without such cooperation it proved pernicious. In addition to the variability of the member countries' exchange holdings as compared with gold, reserve funds were liable to move erratically from one centre to another, from London, for instance, to New York and *vice versa*, and each centre was subject to risks and disturbances on that account. Gold had to be immobilized in these centres as cover against such transfers, and the desired economy of gold was to that extent nullified. When one of the member countries—France—desired to become a gold centre herself, these difficulties were further increased. By and large, however, it was not until the suspension of the gold parity by the United Kingdom that transfers of funds in search of security set in on a really devastating scale from one centre to another.¹ How the breakdown of exchange stability and the cumulative liquidation of the gold exchange system acted and reacted on one another was indicated earlier in this chapter. Here it may be remarked that, given the existence of several centre countries, it is exchange stability as between these centres that is of primary importance for the working of an exchange standard. When the comparative prospects of the various centre currencies became subject to discussion, sudden and disruptive shifts of reserve funds will be difficult to avoid. The problem does not arise in a system with only one centre, and an occasional alteration of exchange rates between a member country and that single centre is unlikely to have serious consequences for the functioning of the system as a whole. This will become clear from a study of the sterling exchange standard, to which we now turn.

¹ Cf. R. G. Hawtrey, *The Gold Standard in Theory and Practice* (1939 edition), p. 267.

CHAPTER III

THE STERLING AREA

FROM the turmoil and confusion that attended the collapse of the international gold standard, there emerged a wide area of exchange stability known as the Sterling Area. Its boundaries were not formally defined; but there were two main characteristics by which countries belonging to it could be identified. First, these countries maintained their currencies in a fixed relationship with the pound sterling. Secondly, they tended to keep their exchange reserves largely if not wholly in the form of sterling balances and other liquid assets in London.

The system was not new. Merged in the general gold standard regime, it had not been conspicuous in form. In fact, however, many countries nominally on gold had long been in practice "on sterling" in the sense just indicated.

When the pound depreciated in September 1931, a group of countries decided from the outset to keep their exchanges stable in terms of sterling rather than gold. This group comprised in the first instance the British Commonwealth of Nations, with the important exception of Canada, whose currency took a middle course between the pound and the U.S. dollar. A few non-British countries, such as Portugal, also joined the sterling group immediately. Others joined it later: the Scandinavian countries, for example, in 1933, Iran and Latvia in 1936, etc. In addition, there were several countries, including Japan and the Argentine, which for many years kept their official exchange rates fixed in sterling, but which were not generally regarded as members of the sterling bloc.

In the autumn of 1939, most of the non-British member countries gave up their link with the pound, and the sterling area became practically co-extensive with the British Commonwealth of Nations, again with the exception of Canada. War-time exchange control transformed the sterling area into a more coherent organization and gave it a more precise and formal status. It is with peace-time developments, however, that the present chapter like the rest of this book is mainly concerned.¹

I. UNDERLYING CONDITIONS

The sterling area has been termed "a great success in so far as it has proved the possibility of maintaining stability in a paper-standard system."² The rise of an exchange standard not rigidly tied to gold

¹ For the changes that took place in the range and organization of the sterling area at the outbreak of the war, see League of Nations, *Monetary Review* (1940), pp. 19 ff., and *World Economic Survey 1939/41*, pp. 130 ff.

² Gustav Cassel, *The Downfall of the Gold Standard*, p. 204.

was no doubt an event of historical significance. What were the conditions that made it possible? On the one hand, there may have been in some countries a growing suspicion and scepticism regarding gold. On the other, the prestige of the pound sterling must have been an important factor, implying confidence in the policy of the British monetary authorities. Without this psychological element it would not be easy to explain the fact that a currency severing its century-old link with gold in time of peace nevertheless retained the allegiance of a considerable number of more or less independent currencies.

Among the more specific motives that led countries to adopt sterling as a standard, political bonds may have played a part, especially within the British Commonwealth. Both in and outside the Commonwealth, however, there were solid economic reasons for the choice. The countries concerned had close financial and commercial relations with the United Kingdom. The commercial ties were further strengthened by the Ottawa system of imperial preference in 1932 and by the far-reaching trade agreements which the United Kingdom subsequently concluded with certain non-British countries such as Denmark, Norway, Sweden and the Argentine. The relative importance of the United Kingdom in the external trade of sterling-area countries is illustrated by the following table.

Percentage Share of United Kingdom in the Foreign Trade of Certain Countries

	Exports			Imports		
	1929	1933	1937	1929	1933	1937
Australia	45	54	52	41	42	42
Denmark	56	64	53	15	28	38
Egypt	34	41	31	21	23	22
Eire	92	94	91	78	70	50
Estonia	38	37	34	10	18	17
Finland	38	46	43	13	21	19
India	21	30	32	42	41	32
Latvia	27	43	38	8	22	21
Norway	27	20	25	21	23	18
New Zealand	74	86	76	49	51	50
Portugal	23	22	22	27	28	18
Sweden	25	26	23	17	18	12
Un. of S. Africa	66	78	79	43	50	43

Apart from the obvious advantage of maintaining *stable* exchange rates—irrespective of their level—with the principal trading partner, these countries had a strong interest in protecting the prices of their exports and safeguarding their competitive position on the British market by allowing their currencies to depreciate in company with the pound. As may be seen from the table above, their export trade was particularly dependent on the British market: with only a few exceptions, the percentages shown under “Exports” are higher than those shown under “Imports.” The interests of gold producers in an area which accounted for about one-half of the total world output of

gold also carried some weight in favour of depreciation with sterling.

The large share of the United Kingdom in the import trade of "sterling countries," though generally lower than in the case of exports, rendered sterling balances useful as a reserve for these countries even if their value in gold currencies fluctuated. For a country which relied on the United Kingdom for (say) 50% of its total imports, sterling balances were more "liquid" than for one which bought only 5% of its imports in the United Kingdom. Moreover, the "liquidity" of sterling reserves was enhanced by the fact that most members of the sterling group had long-term debts to the United Kingdom, payable in sterling; such reserves were certain at any rate to retain the power to discharge those liabilities.

An important influence in the formation of the sterling area was undoubtedly the fact that the decline of money income and business activity in the great depression was less severe in the United Kingdom than in the other leading industrial nations. This was true even before the depreciation of the pound and the introduction of import duties in the latter part of 1931. Industrial production in 1930 was at 92% of the 1929 level in the United Kingdom, compared with 86% in the world as a whole (excluding the U.S.S.R.). As is shown by the indices given in the table below, industrial activity in the United Kingdom at the bottom of the depression—in 1932—was 17% below the 1929 level, while in the United States it was 47% and in Germany 42% below that level. The comparative mildness of the slump in the United Kingdom was partly due to the depreciation of the pound and partly to other factors such as the tariff, the cheap money policy of 1932, the improvement in the terms of trade, the limited extent of the pre-1929 expansion and the accumulation of investment opportunities particularly in residential building. Whatever the reasons for it, the fact stands out clearly from the following table; and it illustrates the importance for the working of an international exchange standard of a reasonable stability of economic conditions in the centre country.

	<i>Industrial Production</i>			<i>Quantum of Imports</i>		
	U.K.	U.S.A.	Germany	U.K.	U.S.A.	Germany
1929	100	100	100	100	100	100
1930	92	83	88	97	88	90
1931	84	68	72	100	76	75
1932	83	53	58	88	62	69
1933	88	63	65	90	67	69

The United Kingdom was the largest importer in the world. The comparative steadiness of British imports, as shown by the quantum indices above, was due not only to the moderate nature of the slump in domestic activity but also to the fact that, as compared with the United States for instance, British imports consisted more largely of foodstuffs, the demand for which is less sensitive to cyclical fluctuations than the demand for industrial raw materials.

The control of foreign capital issues which was imposed in the United Kingdom in 1931-32 was relaxed in the following years so as to facilitate loans even to non-British members of the sterling area wishing to replenish their sterling reserves in the interests of exchange stability in relation to the pound. In fact, very little advantage was taken of this facility, as the sterling reserves acquired by other means, including merchandise exports to the United Kingdom, proved in general adequate.

Apart from this borrowing facility and the (much more important) trading arrangements concluded at Ottawa and after, little was done by the United Kingdom deliberately to consolidate or enlarge the sterling area. "It was to the interest of other countries before the war to have stable rates on London. . . . The sterling exchange standard after September 1931 was not essentially different. The sterling area was formed by other countries pegging their exchanges on sterling. . . . The Exchange Equalization Account was concerned with the relations of sterling to gold currencies and would not buy and hold Swedish kronor, Australian pounds, or other sterling area currencies. Therefore the pegging was carried out at rates satisfactory to the sterling area countries."¹

2. EXCHANGE RATES IN THE STERLING AREA

While a number of sterling countries maintained the old parity with sterling, the majority pegged their currencies to the pound at a discount from the old parity. In no case was a sterling-area currency linked to the pound at a level above the former parity. Thus there was no currency in the sterling group whose gold value depreciated less than that of the pound.

The following table shows the value, as a percentage of the former sterling parity, of currencies pegged to sterling, and the dates from which rates were kept stable in terms of the pound at the levels indicated. As will be noted later, certain currencies appearing in the lower part of the table were not generally regarded as belonging to the sterling group.

The countries listed below fall into several groups: (1) those that at once depreciated their currencies together with the pound (Egypt, India, Iraq, Portugal); (2) those that held on to the old gold parity for a time before depreciating at one stroke to the level of the pound (Estonia, Latvia, Thailand, Union of South Africa); (3) those that left the gold standard very soon after sterling but fluctuated for a time more or less independently, before being linked to the pound (Sweden, Norway, Finland, Denmark, Greece, Japan); (4) those that had already departed from the gold standard before 1931 (Australia, New Zealand, the Argentine).

¹ William Adams Brown, Jr., *The International Gold Standard Reinterpreted, 1914-1934*, p. 1165.

Sterling Value of Currencies

	July 1939 as % of 1929 sterling parity	Date since when £ rate maintained ^b
Egypt	100	Sept. 1931
Estonia	100	Sept. 1933
India	100	Sept. 1931
Iraq	100	Sept. 1931
Latvia	100	Sept. 1936
Portugal	100	Sept. 1931
Thailand	100	Aug. 1932
Un. of S. Africa	99	Dec. 1932
Sweden	94	July 1933
Norway	91	June 1933
Finland	85	March 1933
Denmark	81	Feb. 1933
New Zealand	80	Jan. 1933
Australia	80	Dec. 1931
Argentina ^a	77	Jan. 1934
France	70	May 1938
Greece	69	Sept. 1936
Iran	68	March 1936
Japan	57	Jan. 1933

^a Official buying rate.

^b For the changes made at the outbreak of war in 1939, see *Monetary Review* (1940), p. 20.

Australia left the gold standard at the end of 1929. In January 1931 the Australian trading banks agreed to peg the exchange at £(A)130 per £100. After the depreciation of the British pound, however, the Australian pound showed a tendency to rise in terms of sterling. The Commonwealth Bank of Australia intervened on December 2nd, 1931 by establishing fixed rates at £(A)125 and £(A)125:10/- at which it was prepared to buy and sell sterling, and these rates have been kept unchanged ever since.

The New Zealand pound began to depreciate in 1930 and was pegged to sterling at £(NZ)110 in January 1931. This rate was maintained until January 1933 when new buying and selling rates for sterling were fixed at £(NZ)124 and £(NZ)124:10/- per £100. In December 1938, when New Zealand introduced exchange control, the Reserve Bank ceased quoting a selling rate, as the statutory obligation to redeem its notes in sterling was suspended. The trading banks at the same time raised their buying and selling rates from £(NZ)124 and 124:10/- to £(NZ)124:10/- and 125 respectively. Among the countries generally recognized as members of the sterling group, New Zealand was the only one to introduce exchange control in peace-time; but several other members, such as Denmark, Estonia and Latvia, had introduced exchange control before their adhesion to sterling and maintained it thereafter.

A number of currencies during the 'thirties were at some time or other pegged to sterling without being regarded as belonging to the sterling area proper. The Argentine, for example, kept her official

buying rate pegged to the pound at 15 pesos and her selling rate first at 17 pesos, then at 16 pesos (from December 1936) and later again at 17 pesos (from November 1938); but in the free exchange market she allowed the peso to fluctuate independently of sterling. Bolivia and Uruguay also were in the habit of quoting their official rates of exchange in terms of sterling. The three countries just mentioned depended on the British market for a large part of their export trade. But even countries whose trade relations with the United Kingdom were less close sometimes pegged their rates on sterling: Yugoslavia from July 1936, Greece from September 1936, France from May 1938. In the case of France the "peg" was set in the form of an upper limit at 179 francs to the pound; market rates, when not actually at the limit, were usually only very slightly below it.

Japan, after depreciating her currency by more than 40% in relation to sterling, held it practically constant at a level of 17 yen to the pound from 1933 onwards. At that level the yen appears to have been undervalued; the deficit in the balance of payments in the early depression years turned into a surplus. Japan's trade with the United Kingdom itself was less important than her trade with sterling-area countries outside Europe, and in these countries she competed intensely with British exports.

Even within the sterling area proper, competitive considerations in the choice of exchange rates were not always absent. On January 19th, 1933, New Zealand changed her peg from £(NZ)110 to £(NZ)124 per £100, that is practically to the level of £(A)125 per £100 maintained by Australia, her competitor in the sale of wool and other products. On January 30th, 1933, Denmark, an exporter of butter like New Zealand, raised her peg from about 20.00 Kroner to 22.40 Kroner to the pound, a rate which, as shown by the above table, represented practically the same degree of depreciation as that of New Zealand.

It must be noted, however, that exchange relationships within the sterling area were on the whole remarkably stable. Central banks usually maintained fixed buying and selling rates on sterling with only a very small range between them, so that even the fluctuations that used to occur in gold standard currencies between the gold import and export points were partly or wholly eliminated.¹ From the dates shown in the above table, exchange rates on sterling were kept stable;

¹ Under the gold standard the range between the gold points was determined mainly by the cost of transporting gold from one country to another. When gold was used for domestic circulation, physical transport of the metal was often inevitable. With gold coins withdrawn from circulation, the need for transport and the existence of "gold points" could only arise if by law or convention each country's gold reserves had to be kept at home. In fact, the growing practice of "earmarking" gold abroad made shipments of gold unnecessary. Similarly under an exchange-reserve system costs of transport do not arise, and the spread between buying and selling rates can be narrowed to cover merely the central bank's administrative costs of bookkeeping, etc.

major adjustments, though sometimes contemplated, were not made until the outbreak of war in 1939. This stability of exchange rates, which relieved traders from the risk of exchange fluctuations within the sterling area, has been mentioned as one reason for the rise in the sterling area's share in total world trade during the 'thirties,¹ though the trade agreements referred to above were probably a more important reason.

The Australian Monetary and Banking Commission in 1937, while observing that "the maintenance of a stable exchange rate with sterling has advantages both to exporters and importers, who are able to carry on their business free from the risk of loss arising from movements in the rate," considered it important "not to fix the exchange rate and require the economy in ordinary circumstances to adjust itself to that rate, but to keep the economy reasonably stable and to move the exchange rate, if necessary, as one means to that end."² Further the Commission observed: "Since December 1931 the Commonwealth Bank has kept the exchange rate stable. The Bank states that for some time the central aim of its policy has been that of preventing undue fluctuations in business activity rather than of maintaining stability of exchange."³ On at least one occasion there was some discussion of changing the rate.⁴ In fact, however, Australia's sterling rate was kept unchanged.

Denmark in 1935 preferred to check her domestic credit expansion rather than give up the sterling rate she had adopted early in 1933. Though there was considerable agitation in favour of depreciation, the policy of the authorities was in the end confirmed by a general election.⁵

In Sweden and Finland during the boom period of 1936/37 currency appreciation in relation to sterling was widely discussed as a means of curbing inflationary tendencies. In both countries, it should be remembered, the sterling rates adopted in 1933 were below the former parity with the pound. The Swedish authorities, after leaving the gold standard, had committed themselves to keeping the internal purchasing power of the krona stable; but they proved reluctant to change their sterling rate for this purpose. The desired effect was attained to some extent by offsetting the expansive influence of the balance-of-payments surplus during the years 1936/37 through a

¹ League of Nations, *Review of World Trade 1935*, p. 60.

² Royal Commission to inquire into the Monetary and Banking Systems at present in operation in Australia, *Report* (1937), p. 204.

³ *Ibid.*, p. 215.

⁴ "In 1933-34, when funds were piling up in London and there was some fear that the exchange rate might be lowered, the trading banks sold London funds to the Commonwealth Bank." D. B. Copland, "Some Problems of Australian Banking," in *Economic Journal*, 1937, p. 694.

⁵ Cf. Carl Iversen, "The Importance of the International Margin: Some Lessons of Recent Danish and Swedish Monetary Policy," in *Explorations in Economics: Notes and Essays in Honor of F. W. Taussig*.

reduction in the government's capital outlay and a rise in the budget surplus.¹ Finland pursued a similar policy. Both countries kept their exchange rates on sterling unchanged.

Thus while each member of the sterling area was free to alter its sterling rate without notice and without that loss of prestige resulting from going off gold, there was in practice little inclination to use this freedom of action.² As the Swedish case has shown, any country wishing to prevent an inflationary boom entering from abroad could always to some extent offset the rise in foreign expenditure on its exports by cutting down its own domestic expenditure. This line of policy reduced or removed the need for exchange appreciation in such circumstances. But exchange depreciation likewise, in relation to the pound sterling, was generally avoided by members of the sterling area. This may be attributed in part to the fact that, as already observed, most of the countries concerned had been free to choose their initial sterling rates and had set these rates at levels satisfactory to themselves, in many cases at a discount from the old sterling parity. These rates in conjunction with the large and rising demand for imports on the part of the United Kingdom enabled the member countries in general to accumulate sufficient liquid reserves with which to meet temporary setbacks in their balance of payments without the need for reducing the sterling exchange value of their currencies.

3. RESERVE FUNDS OF MEMBER COUNTRIES

Central banks do not usually specify the currencies in which their liquid foreign assets are held. But in the case of sterling-group countries there is a presumption that they were held largely in sterling. The monetary authorities were naturally inclined to hold their foreign balances in a currency that did not fluctuate in terms of their own monetary unit. In some cases, indeed, as in Australia, Egypt and India, central banks were required by their statutes to hold only sterling in their exchange reserves.

The aggregate central reserves of fifteen sterling-area countries are shown in the table below. The figures for the individual countries will be found in Appendix III. It should be noticed that the table does not by any means cover the whole of the sterling area, since it does not include the British crown colonies, mandated territories (except Palestine) and other dependencies.

The total exchange reserves, which probably consisted to a greater extent of sterling after 1931 than before, display a distinctly cyclical movement, falling to a low point in 1931, rising to a maximum in 1937,³ and declining again in 1938. This is largely a reflection of

¹ A large budget deficit in 1934/35 was turned into a large surplus in 1936/37. Cf. League of Nations, *World Economic Survey 1938/39*, p. 68.

² Cf. Carl Iversen, *op. cit.*, p. 79.

³ Quarterly figures given in *Monetary Review 1938/39*, p. 14, show that the peak was reached in September 1937.

*Central Foreign Exchange and Gold Reserves of Fifteen
Sterling-Area Countries^a*

	£(000,000's)								
End of:	1929	1931	1932	1933	1934	1935	1936	1937	1938
Exchange (in £) ^b	150.9	82.4	108.7	167.8	208.7	211.1	221.6	253.6	216.1
Gold (in old U.S. \$)	(476)	(470)	(494)	(528)	(547)	(588)	(626)	(615)	(690)
Gold (in £) ^b	97.5	139.3	150.7	161.1	186.0	200.9	215.6	208.4	250.1
Total (in £) ^b	248.4	221.7	259.4	328.9	394.7	412.0	437.2	462.0	462.2
Exchange as % of total	61	37	42	51	53	51	51	55	46

^a Australia, Denmark, Egypt, Eire, Estonia, Finland, India, Latvia, New Zealand, Norway, Palestine, Portugal, Sweden, Thailand, Union of South Africa.

^b At current market rates.

changes in the world demand for primary products, of which the exports of these countries mainly consist. The cyclical movement of trade balances will be considered later. In some measure, however, the fluctuations in the exchange reserves of these countries were also a function of their central banks' preference for gold as compared with exchange reserves. This was the case particularly in 1938.

In the above table the total gold reserves of the fifteen countries included are shown first in terms of a constant unit, the U.S. dollar of old gold content, so as to reflect the movement of physical quantities, and are then converted into sterling at current rates, so as to render them comparable with the total of exchange reserves.

In physical quantity, the gold reserves of these countries rose steadily after 1931, though their percentage share in the world total was not increased, remaining throughout at about 4%.

The proportion of exchange reserves in the aggregate sterling value of gold and exchange reserves of the fifteen countries shows a fall from 61% in 1929 to 37% in 1931, partly as a result of the rise in the sterling value of gold. After 1931, the proportion rose to 51% in 1933 and 55% in 1937. In the sterling area the share of foreign exchange in total reserves was thus much higher than under the gold exchange standard, where, as was seen in Chapter II, the proportion never rose above 42%.

By far the greater part of the increase in total reserves in the sterling area from 1932 to 1937 took place in foreign exchange. Yet the fact that gold reserves also increased means that there was no absolute economy of gold through pooling in the reserve centre. As may be seen from Appendix III, however, the total increase in the gold reserves of sterling-group members during the period 1932-37 is more than accounted for by two countries: Sweden and the Union of South Africa. Estonia, Finland, Norway and Portugal also increased their gold holdings during this period, but by an amount which was comparatively insignificant. India and Egypt kept their gold reserves unchanged, while Australia, Denmark, New Zealand and

Thailand reduced them considerably. In Australia, the Commonwealth Bank was authorized in 1932 to hold its statutory cover reserve, not as before exclusively in gold, but either in gold or in sterling. The gold was thus released for export, and in fact practically all of it was replaced by liquid sterling assets.

In 1938 there was a sharp decline in the proportion of foreign exchange in the total reserves of the fifteen countries covered by the above table. This was mainly due to a shift from foreign exchange to gold reserves in four countries—Eire, Latvia, Norway and particularly Sweden—whose combined exchange reserves declined from £78 to £63 million while the value of their gold stocks rose from £66 to £90 million. The gold value of the pound sterling declined by 6% during 1938; and if those countries had refused to accompany the pound in this decline, their sterling reserves would have depreciated in terms of their own currencies. Actually, however, they did not alter their rates on sterling in 1938.

It may be of interest to compare the relative importance of exchange reserves in the sterling group with the position in non-sterling countries. The following table shows the proportion of foreign exchange in the gold and exchange reserves of twenty-six central banks on the basis of book values as published in the balance-sheets.¹ The table does not include countries such as Eire, Palestine and Thailand which held no gold in any of the four years selected. The table reflects clearly the decline of the gold exchange standard and the rise of the sterling area.

The countries are placed in the order of the percentage share of exchange reserves in 1937; and all except two of the countries appearing in the upper half of the table are members of the sterling group. The two exceptions—Austria and Hungary—are among the countries of Central and Eastern Europe whose foreign exchange holdings had come to consist to a large extent of controlled currencies, mainly reichsmarks, acquired through bilateral clearings.²

Commercial banks' holdings of foreign assets, as shown in Appendix III, have in some cases formed a substantial proportion of the liquid international reserves of certain sterling-group countries. When—as was the case in the sterling area—exchange rates on

¹ It may be noted that some of these banks had additional reserves in both gold and foreign assets concealed under other items.

² As a curiosity, it may be worth noting that a perfect example of the use of sterling as an exchange standard was provided by the Free City of Danzig from 1923 to 1931. In 1929, as may be seen from the table, Danzig's central-bank reserves consisted entirely of foreign exchange. Danzig received an independent currency in 1923; and this currency, the gulden, was linked by law to the pound sterling at a ratio of 25 gulden to the pound. The notes of the Bank of Danzig were made redeemable not in gold but in sterling; and the bank was authorized to hold nothing but sterling in its international reserve. This arrangement was abandoned in September 1931, when the gulden was linked to gold, and only gold or gold exchange became eligible for reserve purposes.

*Foreign Exchange as Percentage of Total Gold and Foreign
Exchange Reserves of Twenty-six Central Banks*

	End of:	1929	1931	1934	1937
*Australia		30	57	99	100
*Finland		68	67	82	76
*Egypt		88	82	73	73
*India		67	42	65	65
*Sweden		52	19	61	65
*Norway		31	12	23	56
Austria		79	43	22	47
Hungary		33	18	31	41
*Estonia		75	67	22	39
*Latvia		69	33	8	37
*Denmark		34	9	—	34
*Portugal		65	62	22	33
*Union of South Africa		47	—	32	23
Bulgaria		44	15	7	23
Belgium		34	—	—	21
Ecuador		84	64	40	21
Switzerland		37	4	—	16
Czechoslovakia		64	39	7	15
Roumania		42	3	11	12
Danzig		100	56	11	10
Poland		43	26	5	8
Lithuania		73	38	13	7
Chile		86	66	11	2
France		38	24	1	1
Italy		50	28	1	1
Netherlands		33	9	—	—

* Sterling-area countries.

the currency centre are firmly pegged by the central bank at fixed buying and selling rates, such holdings are practically equivalent to cash since they can be turned over at any moment to the central bank at rates that are known in advance. This, however, presupposes absolute confidence in the maintenance of the peg. In Sweden and Finland, as mentioned before, the possibility of appreciating the currency in relation to sterling was contemplated in 1937. The consequence was that commercial banks passed on the bulk of their sterling balances to the central bank. In Sweden the central bank's exchange reserve reached a record level, while the net short-term foreign assets of the commercial banks declined to a negative quantity, as their foreign liabilities came to exceed their foreign assets. In Norway, a similar movement was observed in 1937. In South Africa there was a movement of the opposite kind: a shift of external reserves from the central bank to the commercial banks (*cf.* Appendix III).

In most cases the net foreign balances of commercial banks were not very considerable in comparison with those of the central banks. In Finland, Norway and Sweden, the commercial banks' net foreign assets were of relatively minor importance in most years; and in Denmark, Estonia and Latvia the commercial banks, more often than not, showed net foreign liabilities (*cf.* Appendix III).

The data, however, are incomplete. Thus, the New Zealand trading banks' external assets, which showed a decline parallel to those of the newly-established central bank after 1934, are not known before that date. In India, the holdings of commercial banks are believed to have been important; but the figures have not been published. For Australia, some of the figures published by the Monetary and Banking Commission in 1937 are reproduced below. There was evidently a marked shift in the holding of "London Funds" from the trading banks to the Commonwealth Bank. In 1928 the share of the Commonwealth Bank in the total was just over 20%; after 1932 it was normally well above 50%. The Monetary and Banking Commission in 1937 recommended a further concentration of exchange reserves in the hands of the Commonwealth Bank.¹

London Funds of Australian Banks^a

	£ stg (000,000's)							
June 30th:	1928	1931	1934	1935	1936	1937	1938	1939
Commonwealth Bank	11.5	4.7	43.8	25.9	22.9	44.7	37.0	28.1
Trading Banks	41.3	15.9	24.2	18.0	23.5	27.2	25.8	16.6
	52.8	20.6	68.0	43.9	46.4	71.9	62.8	44.7

^a Source: Report of Monetary and Banking Commission (*op. cit.*) for all years up to 1936. Thereafter, reports of Commonwealth Bank.

A word must now be said about the external transactions which determined the fluctuations in the monetary reserves of members of the sterling group. The movement of the sterling area's external trade is illustrated in the following table, covering the same fifteen countries that were included in the total reserve figures. The cycle of depression and recovery is very clear from the figures. It will be noticed, however, that while exports reached their lowest level in 1932, imports—with their usual lag—did not do so until 1933, when exports had already begun to recover. The result was an exceptionally favourable trade balance in that year. The balance deteriorated considerably in 1938.² This seems to have been due mainly to the fall in exports to countries other than the United Kingdom. Just as in 1929-32, exports to the United Kingdom seem to have kept up better, so far as can be judged from the lower part of the table which is based on the United Kingdom's trade statistics and is thus, on account of transport costs and the time-lag due to transport, not strictly comparable with the totals in the upper part.

¹ *Report, op. cit.*, pp. 229 ff.

² This balance represents the balance of the fifteen countries as a whole in relation to the rest of the world. It is obvious that, within the group of fifteen countries, one country's export surplus in relation to another country in this group is the latter country's import surplus in relation to the former. Trade balances within the group thus cancel out in the addition. The same is true of the balances of payments shown in the next table.

Merchandise Exports and Imports of Fifteen Sterling-Area Countries^a

	£(000,000's)									
	1929	1931	1932	1933	1934	1935	1936	1937	1938	
1. <i>Total Exports and Imports</i>										
Exports	874	518	472	489	512	544	612	764	696	
Imports	938	571	502	482	557	611	650	827	790	
Balance	— 64	— 53	— 30	+ 7	— 45	— 67	— 38	— 63	— 94	
2. <i>Exports to and Imports from the United Kingdom^b</i>										
Exports	337	249	228	225	236	238	273	323	307	
Imports	278	148	146	149	172	186	194	221	211	
Balance	+ 59	+101	+ 82	+ 76	+ 64	+ 52	+ 79	+102	+ 96	

^a Australia, Denmark, Egypt, Eire, Estonia, Finland, India, Latvia, New Zealand, Norway, Palestine, Portugal, Sweden, Thailand, Union of South Africa.

^b United Kingdom's imports from and exports to the fifteen countries.

The preceding table relates only to merchandise trade. The sterling-area, however, contains important gold producing and gold exporting regions, such as South Africa, Australia and India; and the gold exports from these regions are of the same nature as merchandise transactions. In the following table of the external balance of payments of ten sterling-area countries, the movement of gold is therefore shown together with merchandise, interest and other services, and the balances on account of these four items are combined into a total balance which, apart from errors and omissions, reflects roughly the movement of capital. This movement of capital includes, of course, the changes in central and commercial banks' external assets, discussed earlier. Indeed it appears that the favourable balance of these countries in the years 1931-36 was larger than the increase in external banking assets. In 1931 and 1932 a part of the balance was used for the repayment of short-term foreign credits. In the later

Balance of Payments of Ten Sterling-Area Countries^a

	£(000,000's)							
	1929	1931	1932	1933	1934	1935	1936	1937
Merchandise	—66	— 3	— 1	+ 33	— 26	— 21	+ 8	—
Interest and Dividends	—98	—84	— 92	— 89	— 88	— 90	— 92	—
Other Services	+14	+ 9	+ 8	+ 11	+ 11	+ 10	+ 9	—
Gold	+63	+99	+138	+119	+105	+108	+112	+107
Total Goods, Services, Gold	—87	+21	+ 53	+ 74	+ 2	+ 7	+ 37	— 40

^a Australia, Denmark, Estonia, Finland, India, Iraq, Latvia, New Zealand, Norway, Union of South Africa. For some countries the balance-of-payments statistics refer to fiscal years, beginning April 1st in India, Iraq and New Zealand and July 1st in Australia. Hence the above figures for 1937 are affected by the recession which set in at the middle of that year.

years the balance reflected to some extent the repayment of long-term loans, combined with the virtual absence of new international

lending. There was, it is true, a certain amount of foreign investment in sterling-area countries in the form of equities and participations during the years 1933-37. But the repatriation of bonded debt which went on during the same period appears to have been quite substantial. Had it not been for this repayment of capital, the increase in the exchange reserves of the sterling group would have been even greater. The increase that did occur in sterling-area exchange reserves itself created conditions conducive to the repatriation of external debt. The purchase of foreign exchange by central banks tended to broaden the domestic credit base. The resulting decline in interest rates made it possible and advantageous for domestic borrowers to repay foreign debt by issuing new loans at home. This was so especially in the case of government debt. Countries such as Australia, Denmark, Egypt, Finland, India, Norway, Portugal, South Africa and Thailand all showed a reduction in their external public debt during the 'thirties. The reduction was particularly marked in the four countries shown below, which pursued a policy of large-scale debt repatriation:

Public Debt, External (A) and Internal (B)

		National currencies, 000,000's							
		Finland (Markka)		India (Rupee)		Norway (Krone)		South Africa (£)	
		Dec. 31st		March 31st		June 30th		March 31st	
		A	B	A	B	A	B	A	B
1931		5,723	473	5,181	6,518	758	760	161	96
1939		1,865	3,034	4,691	7,364	596	932	101	178

These examples, however, may give an exaggerated idea of the volume of debt repayment. The movement of government debt, while constituting an important share in total external debt, was not entirely representative. Further, it should be noted that the repayments were not made to the United Kingdom alone. Thus the Finnish loans that were repaid in the 'thirties were largely held in the United States. Yet the movement had a perceptible effect on the British creditor position. According to Lord Kindersley's estimates, the annual amount of overseas capital repayment to the United Kingdom rose from £27 million in 1931 to £107 million in 1936; and the grand total of the United Kingdom's overseas investments showed a decline from £3,788 million in 1935 to £3,754 million in 1937.¹

4. THE POSITION OF THE CENTRE

As already observed, it is reasonable to suppose, even where the information is lacking, that the members of the sterling area held their exchange reserves mostly in London. It is known that their sterling reserves were invested largely in British Treasury bills through the Bank of England. The growth of sterling-area funds in London

¹ League of Nations, *Balances of Payments 1938*, p. 135.

represented an influx of capital into the United Kingdom. The effects of this influx must be considered in relation to the policy of the Exchange Equalization Fund, the functions of which, as shown in Chapter VI below, came to include the protection of the domestic credit base from the effects of international capital movements. The Fund comprised a fixed aggregate of gold and Treasury bills, so that when it bought gold it disposed of some of its Treasury bills to the market and when it sold gold it withdrew Treasury bills from the market.

It is necessary to distinguish between two sources from which the reserve balances of sterling-area members were acquired. They were acquired partly in transactions with countries outside the sterling area and partly in transactions with the centre of the sterling area, the United Kingdom itself. To the extent that the reserve balances were acquired from the non-sterling world and transferred for safekeeping to London, they were merged in the general flow of capital and came to be treated in the same way as, for instance, the inflow of "hot money" from France, the effects of which were offset by the Equalization Fund by the purchase of gold with money obtained from the domestic market through the issue of Treasury bills. In this case the additional demand for Treasury bills due to the incoming sterling-area balances tended to be roughly met by the issue of additional Treasury bills on the part of the Exchange Equalization Fund.

To the extent, however, that these balances were acquired in commercial transactions with the United Kingdom itself, they did not give rise to a movement of gold, and their investment in Treasury bills was not accompanied by an increase in the supply of bills by the Exchange Equalization Fund. The result was an increased competition for Treasury bills on the London market. This tended indeed to keep down the discount rate on Treasury bills. But it also had a somewhat restrictive effect on the credit system as a whole. In addition to a minimum cash ratio of 10% the London Clearing Banks maintained a tradition of covering at least 30% of their aggregate deposits by liquid assets—namely, cash, call loans and bills. The call loans were made largely to the discount market and represented to that extent an indirect holding of bills. In view of the decline in the volume of commercial bills, the banks were greatly dependent on Treasury bills for their supply of "quick assets." When a greater proportion of the available supply of Treasury bills in London was taken up by sterling-area central banks, less was left over for the clearing banks. The shortage of bills, if not actually deflationary, acted at any rate as a check on the expansion of credit. The effect was thus somewhat analogous to what would have happened under the orthodox gold standard, though obviously much weaker.

Although it is difficult to judge what proportion of the surplus in the external accounts of sterling-group members was acquired in

transactions with the United Kingdom and the non-sterling world respectively, there seems no doubt that a substantial part of the surplus was acquired in the United Kingdom, especially in the years 1935-37 when the sterling area's trade balance with the United Kingdom rapidly improved, while its balance with the rest of the world tended to deteriorate (see table, page 59 above).

As a result, the "outside competition" for Treasury bills—that is, the demand for bills originating outside the London clearing banks and discount market—became a familiar feature in the London money market during the years 1935-37. Though part of this outside demand was due to other factors, there is no doubt that the growth of sterling-area reserve funds played an important role.¹

In 1938 the combined trade balance of sterling-area member countries turned increasingly passive owing to the fall in prices of primary products, and the volume of sterling-area funds in London declined. Had this been due to a deficit of payments in relation to the United Kingdom alone, the "outside" holdings of Treasury bills in London would have been greatly reduced and the restrictive influence of the bill shortage relieved. In fact, some reduction in these outside holdings seems to have taken place; the London Clearing Banks were able to secure a larger share of the available supply of Treasury bills.² The available supply, however, was sharply reduced not only by the outflow of foreign "hot money" from London but also by the fact that the deterioration in the sterling area's trade balance occurred predominantly in relation to the non-sterling world as distinct from the United Kingdom. Most of the reduction in the sterling area's London funds was thus accompanied by a loss of gold on the part of the Exchange Equalization Fund and a corresponding withdrawal of Treasury bills from the market.

The point that emerges from the preceding discussion is that, under the conditions existing at the time, changes in sterling-area London funds, in so far as they arose from the balance of payments with the United Kingdom itself, tended to have effects on credit conditions in the United Kingdom analogous to, though much weaker than, those commonly associated with the gold standard mechanism. But it would be quite misleading to represent the changes just discussed, particu-

¹ See *Monetary Review 1937/38*, pp. 50-51, whence the following figures may be quoted, reflecting a steady rise in "outside" holdings of Treasury bills (line 4) and a decline in the banks' ratio of "quick assets" in 1936 and 1937 (line 5):

Monthly average for December:				
	1934	1935	1936	1937
	£(000,000's)			
1. Treasury bills outstanding ("Tender issue")	447	565	614	621
2. Clearing banks' call and short loans	151	159	187	155
3. Clearing banks' bills discounted	255	322	315	295
4. "Tender issue" less banks' call loans and bills	41	84	112	171
5. Clearing banks' "quick assets" as % of deposits	31.5	33.6	32.8	30.4

² Cf. *Monetary Review 1938/39*, pp. 52 ff.

larly the changes in the amount of Treasury bills available to the London Clearing Banks, as automatic consequences of the working of the sterling exchange standard. With the effective and continuous central management which had been developed in the British credit system, there was little scope for any element of "automatism" that did not suit the purpose of the British monetary authorities.¹

There was one feature in the sterling exchange system which facilitated the problem of credit management in the centre country. The Bank of England was able to make arrangements with most of the sterling-area central banks by which the latter entrusted it with the investment and administration of the major part, if not the whole, of their London funds. Thus it was the Bank of England that placed the applications for Treasury bills at the weekly tender on behalf of its clients, the sterling-area central banks. This arrangement had two advantages for the centre country. On the one hand, it enabled the Bank of England to keep itself informed as to the volume and fluctuations of sterling-area funds; the amount of such funds as were still held with other banks was periodically reported to the Bank of England. On the other hand, by the use of Treasury bills as the medium of investment, the extent to which the Bank's own balance-sheet was affected by the administration of these funds was reduced to a minimum. The advantages of central management and information could also have been obtained if the sterling countries had kept their London funds on deposit with the Bank of England. But this would have exposed the fluctuations in these funds to the public view; and it would have required extensive offsetting operations on the part of the Bank so as to preserve stability in the domestic credit base. Under the procedure actually adopted, the great bulk of the sterling-area funds, being invested in Treasury bills, did not enter into the balance-sheet of the Bank of England at all. Fluctuations in "Other Deposits" in the Bank's weekly return did occur from time to time; but they were confined to a comparatively narrow range.

The operation of an exchange reserve system such as the sterling area involves no doubt certain inconveniences to the reserve centre. It has often been argued that, while the United Kingdom could not "go off sterling," the member countries could obtain competitive advantages at the expense of the United Kingdom by pegging their currencies to the pound at an unduly low level. As noted before, this one-sided fixing of exchange rates was really due to the fact that while Sweden and Australia, for example, were willing to buy and hold sterling, the British monetary authorities were not prepared to buy and hold currencies of the member countries. Indeed, a centralized exchange reserve system would have been impossible if both the centre and the members had held each others' currencies.

However, the pegging of exchange rates in a system such as the

¹ *Ibid.*, pp. 55-56.

sterling area should not be considered in isolation. The other distinctive element in such a system—the holding of reserve balances in the centre—has this consequence that any deficit in the centre country's balance of payments with the member countries, reflecting an overvaluation of the centre currency in relation to the members, tends to be covered by an "equilibrating" inflow of funds into the centre in the form of an increase in the member countries' exchange reserves. Some initial undervaluation of the members currencies may be necessary for the system to come into existence at all, so as to permit member countries which have no adequate reserves of gold or other suitable assets to build up a sufficient amount of reserve balances in the centre. We may recall that under the gold exchange standard the member countries acquired their reserves largely through short-term credits granted by the centres; this was not a feature that contributed to the stability of the system; in fact, the sudden withdrawal of these credits in the liquidity crisis of 1931 led to the breakdown of the system. In the sterling area, by contrast, the member countries were enabled to build up their reserves mainly through surpluses in their current balance of payments. It is clear, however, that a persistent and excessive undervaluation of member currencies must after a point become objectionable to the centre country. As will be emphasized in Chapter V, there is always a basic general need for fixing the rates of exchange between different currencies by mutual agreement and consultation. This applies equally to the exchange relationships within a system such as the sterling area.

No doubt it may be an inconvenience for the centre country to have to pay interest to the member countries on their exchange reserves. This is hardly, however, a matter of major importance. The market rate on Treasury bills in London was little more than $\frac{1}{2}\%$ during most of the 'thirties. The interest paid by the reserve centre may be viewed as a price for the enhanced liquidity which the centre enjoys by virtue of the fact that it can use its own currency as a means of settlement throughout the area over which the system operates.

While the centre of an exchange reserve system may thus be to some extent relieved of anxiety regarding its accounts with member countries, its liquidity in relation to non-member countries presents a very different problem. The centre has to keep reserves for the whole area for settlements with the outside world. It was gold that constituted the international reserve of the sterling area as a whole in relation to the non-sterling world. The fact that the sterling area itself was an important producer of gold made the problem easier for the centre. Nevertheless, the fluctuating balance of payments of the member countries with non-member countries was capable of rendering the centre vulnerable to international disequilibria in which it was not otherwise concerned. In particular, the United Kingdom, though itself a highly industrialized country, had to meet some of the strain falling

on the sterling area from fluctuations in agricultural prices. Thus the fact that the sterling area of the 'thirties was not a closed system, but was exposed to cyclical disturbances originating frequently outside, undoubtedly gave the centre a position of considerable difficulty and responsibility. With the adoption of exchange control at the beginning of the war, that position was radically altered; but so were the conditions in which and the purposes for which the whole system was called upon to function.

CHAPTER IV

CENTRAL BANKING AND INTERNATIONAL CURRENCY RESERVES

I. THE "RULES OF THE GAME"

HAVING examined the conditions which governed the aggregate supply of international currency (gold and foreign exchange) during the inter-war period, we may now inquire how individual central banks, in their conduct of domestic credit policy, reacted to changes in their reserves of international currency. The present volume is concerned with international monetary relations. But clearly these cannot be considered in isolation. They are conditioned at every step by "domestic" developments and "domestic" acts of policy; and any international currency scheme is therefore necessarily based on certain postulates, implied or explicit, as to the working of national monetary policies.

The gold standard, or indeed any system of stable exchange rates, is a system in which the quantity of money in each country is determined primarily by the balance of payments. Under any form of gold standard, gold is used for the settlement of discrepancies in the balance of payments. Under the "gold specie standard," where the domestic circulation as well as the international means of settlement consisted largely of gold, the relationship between the domestic money supply and the balance of payments was direct and immediate; in fact, the very distinction between national and international currency became important only with the growing use of bank notes and deposits in the domestic circulation. Under the "gold bullion standard," where bank notes and deposits formed the great bulk of domestic money, the relationship was less obvious but still generally operative, since any purchase of gold by the central bank could normally be expected to increase a country's note circulation and bank deposits while any outflow of gold usually decreased them.

But the traditional view of the operation of the gold bullion standard assigned to central banks more than the passive function of converting domestic into international currency and *vice versa*. Whenever gold flowed in, the central bank was expected to increase the national currency supply not only through the purchase of that gold but also through the acquisition of additional domestic assets; and, similarly, when gold flowed out, the central bank was supposed to contract its domestic assets also. In this way the influence of gold movements on the domestic credit base was to be magnified, and magnified in accordance with the central bank's reserve ratio. With a ratio of 33%, for instance, any net increase or decrease in the gold

reserve was thus supposed to create a threefold expansion or contraction in the total credit base. It is clear that regulation of central-bank credit by reference to the cover ratio (that is, the ratio of gold to liabilities) could be implemented only by increasing or decreasing the bank's domestic assets with every increase or decrease in its gold reserve. The chief methods to be used for changing the volume of domestic central-bank assets in accordance with this principle were changes in the discount rate, designed to make borrowing from the central bank either more or less attractive, and purchases or sales of securities in the open market on the central bank's own initiative.

Such, in essence, were the "rules of the game" by which a central bank was to be guided in its domestic policy. Needless to say, they were never laid down in precise terms, and it would indeed have been difficult to do so. "The management of an international standard is an art and not a science, and no one would suggest that it is possible to draw up a formal code of action admitting of no exceptions and qualifications, adherence to which is obligatory, on peril of wrecking the whole structure."¹ The "rules" were never more than a set of crude signals and signposts. If they applied to gold movements, they applied equally, of course, to shifts in central banks' foreign balances under exchange-reserve systems such as the gold exchange standard or the sterling area. Their object, above all, was to secure quick and continuous adjustment of international balances of payments. The expansion of credit in the gold-receiving and the contraction of credit in the gold-losing country were intended to affect prices and incomes in such a way as to close the gap in the balance of payments which had given rise to the transfer of gold; and even before this adjustment through prices and incomes was completed, the changes in money rates which caused or at least accompanied the change in the volume of domestic credit in the two countries could generally be expected to reduce if not to close the gap through transfers of private short-term funds from the gold-receiving to the gold-losing country.

This general picture of the adjustment process and of the role of central-bank policy in that process was given authoritative expression by the British "Cunliffe Committee" at the very outset of the inter-war period; and it was one which during much of that period dominated men's ideas both as to the actual working of the gold standard before 1914 and as to the way the gold standard should be made to work after its restoration. There was a wide belief in the early 'twenties that the monetary upheavals of that time were due to the absence of the equilibrating mechanism enforced by the gold-standard "rules of the game."

Whether this picture affords a satisfactory account of what happened even in the best days of the gold standard before 1914 is a

¹ *Report of the Committee on Finance and Industry* ("Macmillan Committee"), London 1931, paragraph 47.

question that may be touched upon later. Our first task is to confront it with the actual behaviour of central banks during the inter-war period.

2. NEUTRALIZATION, DESIGNED AND UNDESIGNED

The "rules," as just noted, require that in general the effect of changes in central banks' international assets (gold and foreign exchange) should be reinforced by concurrent changes in domestic assets. It is a striking fact that, from year to year, central banks' international and domestic assets, during most of the period under review, moved far more often in the *opposite* than in the same direction.

This is brought out by Table 1 in Appendix IV, covering twenty-six countries during the period 1922-1938 and showing the increase or decrease in (A) international and (B) domestic assets in each year as a percentage of total assets at the end of the previous year. The ratio of the percentage increase or decrease in international assets is entered, with the appropriate sign, in a third column (C). The three sets of figures give an adequate idea of the quantitative importance of the various changes and of the extent to which, for instance, a fall in international assets in any year was offset by a rise or reinforced by a reduction in domestic assets. The figures may be consulted in the appendix. But here it may be useful simply to tabulate the signs (from Column C of the appendix) which indicate whether in any year the correlation was positive or negative.

This synopsis is given on the opposite page. The *plus* sign means that central banks' international and domestic assets both changed in the same direction, up or down, in the year indicated. The *minus* sign means that they changed in opposite directions. In addition there are a few cases (o) where domestic assets remained constant or practically constant while international assets changed, or (∞) where the former changed while the latter remained constant.

There are 382 observations in all, including 121 *plus* signs (32% of the total) and 232 *minus* signs (60% of the total), the rest being cases marked o or ∞ . At a glance, indeed, it is obvious that the negative correlation was much more frequent than the positive.

Such are the facts. But they need to be interpreted with caution. In the first place, our observations relate to yearly intervals. It is possible that domestic assets may be adjusted in the same direction as changes in international assets, not immediately, but with a lag of more than a year, in which case the year-to-year figures might conceal a process of adjustment taking place on the traditional lines. A lag in the process of adjustment is, after all, natural. Suppose an expansion of domestic credit gets under way in some country; the central bank's domestic assets increase while its international reserve is likely to fall, thus "offsetting" part at least of the rise in domestic

*Changes in Central Banks'
International and Domestic Assets*

+ : Change in the same direction. — : Change in opposite directions.
o : No change in domestic assets. ∞ : No change in international assets.

The figures at the right (a) and at the bottom (b) are the percentages of (+) in the total number of observations for each country (a) and for each year (b).

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	(a)
Australia	—	—	—	—	—	+	+	—	—	+	+	—	+	+	+	—	—	41
Austria			—	—	—	o	+	—	—	—	—	—	—	—	+	—		14
Bulgaria	+	+	—	—	—	—	—	+	+	+	+	+	+	+	—	+	—	59
Chile						—	—	—	o	—	—	+	+	8	+	8	+	33
Colombia							—	—	+	—	+	—	—	o	+	—	—	27
Czechoslovakia	—	—	+	—	—	—	o	—	—	—	—	+	—	+	+	+	—	29
Denmark	—	+	—	—	+	+	—	—	—	—	—	—	—	+	—	—	+	29
Finland	—	—	+	—	—	+	—	+	—	—	—	—	o	+	+	+	+	41
France						—	—	+	o	+	+	—	—	—	—	—	+	33
Germany			+	—	o	—	—	—	+	—	+	—	—	+	—	+	8	33
Greece		+	—	+	—	—		o	—	o	—	+	—	—	—	+	+	33
Hungary					—	+	—	+	+	—	—	—	—	—	+	—	+	38
Italy						—	o	—	+	—	—	—	—	—	+	8	—	17
Japan	+	—	+	+	+	—	—	—	—	—	—	—	+	+	—	+	8	41
Netherlands	—	—	—	+	—	—	—	—	—	o	—	—	+	+	+	+	+	35
Norway	—	+	—	—	+	+	—	—	—	—	+	—	—	—	+	—	+	35
Peru									8	—	—	+	8	—	+	+	—	33
Poland				—	—	+	—	—	+	—	+	—	—	—	—	—	—	21
Roumania						—	—	—	+	—	+	—	+	—	—	+	+	42
Sweden	—	—	o	—	8	+	—	—	—	—	—	—	—	—	o	—	—	6
Switzerland	8	—	—	+	+	+	+	—	+	—	—	—	+	—	—	—	—	35
Un. of S. Africa	+	—	—	—	—	—	—	—	—	—	—	—	o	—	+	—	—	12
United Kingdom	+	+	8	—	—	—	8	+	+	—	+	—	—	—	+	—	8	35
United States	—	—	—	—	—	—	—	—	—	+	+	+	—	o	o	+	o	24
Uruguay							+	—	—	+	—	—	+	—	—	—	+	36
Yugoslavia							+	—	—	—	—	+	—	—	+	—	+	36
(b)	31	36	25	24	22	37	21	20	35	19	38	27	31	31	54	38	44	

assets. It may be only after some time—say two or three years—that the central bank is “pulled up short” by the fall in its international reserve and that it may feel obliged to start contracting its domestic assets; and this contraction, again, may go on for two or three years and is likely to be accompanied by a return flow of gold and exchange reserves. In both the expansion and the contraction phase, domestic

and international assets may thus move in opposite directions from year to year, and yet the "rules of the game" may operate, albeit with a lag. Similarly, if the process started with an increase in international assets, the immediate automatic effect might well be a decline in domestic assets, while later, when an increase in domestic assets is brought about in accordance with the increased international reserve, some decline is not unlikely to occur in the international reserve. Such lags are natural since one of the very functions of an international cash reserve is to give the country a breathing-space in which the required adjustments can be accomplished more gradually than would otherwise be necessary. As we shall see, however, it is not always easy to draw a line between such delayed adjustment and deliberate neutralization with a view to avoiding adjustment.

Secondly, experience shows that there is at times a strong "automatic" tendency towards neutralization, a tendency already implied in what has just been said about delayed adjustment and one which may easily extend over periods of two or three years. Whenever an inverse correlation is observed between a central bank's international and domestic assets, it may be quite wrong to interpret it as a deliberate act of neutralization on the part of that bank. It may well be due to the bank's inaction rather than to its action. An inflow of gold, for instance, tends to result in increased liquidity on the domestic money market, which in turn may naturally lead the market to repay some of its indebtedness to the central bank. The balance-sheet of the bank will show an increase in gold and a decrease in domestic discounts and advances, and so the gold movement will have been neutralized at least in part, even though the bank may have been completely passive. Similarly, an outflow of gold, tending to reduce the funds available to the market, may be partly offset by an increase in borrowing from the central bank on the market's initiative. Even to prevent domestic assets from changing in this way whenever gold flows in or out, would require definite action by the central bank either through changes in the terms of its lending or through sales or purchases of securities designed to offset the automatic responses in the market's indebtedness to the bank. To make domestic assets change in a manner *parallel* to changes in the international reserve would obviously demand a still greater degree of activity on the part of the central bank. Failing such action, "automatic neutralization" may tend to be the rule rather than the exception.

Even if the central bank's domestic assets remain unchanged, neutralization of a similar "automatic" nature may take place outside the central bank, in the next layer of the credit pyramid. If the central bank's domestic assets are very small to start with, or if they consist mainly of securities rather than commercial discounts and advances, no automatic neutralization can occur within the central bank, and so an inflow of gold will increase the cash reserves of commercial banks;

and if no additional credit structure is built upon the additional cash reserves, the inflow is in effect neutralized. Considerations of profit would normally induce the commercial banks to take some action to expand their credit structure in such circumstances; but interest reductions on their advances may encounter an inelastic demand or a lack of creditworthy borrowers, while security purchases involve a risk of capital depreciation; and though some countries have prescribed a minimum cash ratio, a maximum limit to the accumulation of cash reserves by commercial banks has nowhere been applied by law. In the sphere of commercial as well as that of central banks, banking policy has its limitations; and on occasion it would have required more than banking policy to secure the effects aimed at by the "rules of the game."

Apart from a few countries such as England, where cash ratios have been kept remarkably stable as a matter of convention or tradition, wide variations in commercial banks' reserve ratios have in consequence been quite common.¹ In the Netherlands, for example, where the central bank's domestic assets were relatively small to begin with and where inside the central bank there was consequently little scope for neutralization, automatic or otherwise, a heavy influx of gold resulted in an increase in the commercial banks' cash ratio from 7.2% in 1930 to 19.0% in 1932, without any increase in commercial bank deposits. In Switzerland, with a similar condition of central bank assets, an inflow of gold during 1936 more than doubled the commercial banks' cash ratio without producing any rise in deposits. In the United States, where the Federal Reserve System had only an insignificant commercial portfolio and kept its large security holdings unchanged, gold imports produced an increase in member banks' cash reserves in excess of legal requirements from \$866 million in January 1934 to \$3,084 million in January 1936. In these and many similar cases, movements in international reserves were partly or wholly "neutralized" in the sphere of commercial as distinct from central banking.

To return to the central banking sphere, there was another factor to explain the inverse correlation of the banks' domestic and international assets at certain times and more particularly during the years 1925-1928. During that period the gold standard had been reestablished over a wide area; confidence had been restored to some extent; and private short-term credit showed in consequence a relatively high mobility in response to interest differentials between the various money markets. Some contemporary observers, indeed, regarded the mobility of short-term funds as excessive, on the ground that it tended to weaken the control of individual central banks over their local money markets. Whenever a country's balance of payments

¹ See, for example, *Money and Banking* 1938/39, Vol. I. Appendix (Table IX: "Cash Ratios of Commercial Banks").

turned passive, gold would tend to move out; but if the central bank then reacted in the traditional manner by pushing money rates up, foreign funds would flow in to take advantage of the higher rates, and a part of the central bank's domestic assets would be promptly replaced by international assets without much if any effect on the total credit base. Such "equilibrating" capital movements, as we have called them, certainly complicated the task of any central bank trying to follow the "rules of the game" in its internal credit policy; and it is obvious that they tended to produce opposite rather than concurrent changes in a central bank's international and domestic assets from one year to another. Any increase in bank rate or open-market sale of securities was likely to produce a rise in international and a fall in domestic assets; any bank-rate reduction or open-market purchase would make the local money market less attractive to foreign funds and so lead to a fall in international and a rise in domestic assets. In technical terms, there was a competitive rather than a complementary relationship between foreign and domestic credit, and the supply of money to any single market was highly elastic.

A good illustration of this state of affairs was Germany. In four out of the six years from 1924 to 1929 the Reichsbank's international and domestic assets moved in opposite directions. On certain occasions the bank resorted to direct rationing of its domestic credits to avoid having to raise its discount rate unduly. Market rates, however, could not fail to be affected by such rationing, and the device was consequently not very effective in averting the influx of foreign funds when the bank wished to restrict total credit.

In such countries as Austria, Bulgaria and Czechoslovakia, as well as Germany, international and domestic central-bank assets showed mostly negative correlation during the period 1924-29, and there is little doubt that this was partly due to the mechanism of short-term capital movements just described.

The "solidarity of money markets" weakened after 1928 and broke down in 1931. As a reflection of this, the parallelism which had been observed in the years 1925-28 between the movements of both official and market rates of discount in various countries gave way to a great diversity in the trend of local money rates and large discrepancies between them. The flow of short-term funds became increasingly "disequilibrating" rather than "equilibrating."¹

¹ Cf. Chapter I, Section 2, above. A disequilibrating movement of short-term funds may be simply defined as a transfer which proceeds in such a direction that the discount or interest return on comparable assets is higher in the country of provenance than in the country of destination. But the terms "equilibrating" and "disequilibrating" refer primarily to the effect of short-term capital movements on the balance of payments; and it may therefore be more appropriate to define a disequilibrating movement as one in which short-term funds move from a country with a deficit to a country with a surplus in current international transactions combined with any commercial or investment loans. It is not unlikely that the two

So far we have considered certain "normal" or "automatic" factors causing shifts in international currency reserves to be offset or neutralized. At the very beginning of our period, however, there were "abnormal" developments which necessitated deliberate neutralization.

From 1920 to 1924 the United States was the only major country on the gold standard, and gold flowed to it in large volume in payment mainly for the large export surpluses which the United States supplied to the rest of the world, especially to Europe. Inflation and exchange depreciation prevailed in many of the countries from which the gold was received. In those countries the export of gold certainly did not produce the traditional effect on the monetary circulation, nor could it be expected to do so in the circumstances.¹ What was the United States to do?

In fact, the United States neutralized most of the gold influx. No doubt the neutralization occurred in part automatically, as the incoming gold made the market more liquid and decreased the commercial banks' dependence on the Federal Reserve System. A special factor promoting this neutralization was the wholesale liquidation of domestic credit in the 1921 depression. In addition, however, the Federal Reserve banks at certain times—notably in 1921 and 1923—reduced their holdings of domestic assets on their own initiative ("bills bought" and United States Government securities). Lastly, they kept some of the gold outside the credit base by putting it into circulation in the form of gold certificates.

An authoritative explanation and justification of this policy was given in the Federal Reserve Board's 10th Annual Report (1923), containing a lengthy discussion of "Guides to Credit Policy," which has been described as "the most comprehensive statement of Federal Reserve credit policy and . . . the leading contribution of the Federal Reserve System to the development of central banking theory and practice."² In the first place, the Report pointed out that "in the payment for goods purchased in the United States the foreign countries have used gold, not as before the war chiefly in the settlement of balances, but more as one of the commodities that they were able to

criteria would give the same result in most of the individual instances that could be selected from the experience of the inter-war period.

¹ One of the countries that lost gold during this period was Japan, which had accumulated a large stock of gold and foreign currency through an extremely favourable balance of payments during the war and the first two post-war years. For three years after 1920, when her balance of payments turned heavily passive through the collapse of silk prices in America and the earthquake in Tokyo and Yokohama, she surrendered foreign liquid assets (thus steadying the exchange value of the yen) and expanded domestic credit simultaneously. This is only partly reflected in our table in Appendix IV, since both the purchases of gold and foreign balances up to 1920 and the subsequent sales were carried out largely on government account.

² Charles O. Hardy, *Credit Policies of the Federal Reserve System* (Brookings Institution, 1932), p. 77.

export to the United States" (p. 21). "Under the present conditions," it stated, "... the movement of gold to this country does not reflect the relative position of the money markets nor does the movement give rise to corrective influences, working through exchanges, money rates and price levels, which tend to reverse the flow" (p. 30). In these circumstances, the Report went on, gold reserve ratios "have lost much of their value as administrative guides. It has therefore been necessary for banking administration . . . to develop or devise other working bases" (p. 30). The nature of those "working bases" need not be considered here; it is enough to say that the Report emphasized the Federal Reserve Banks' "large responsibilities for the constant maintenance of a sound credit situation" (p. 20) and the importance of "so managing the vast gold supply domiciled here that it may be available for redistribution by export as occasion may arise without producing any untoward or disturbing effects in our own domestic, economic, and financial situation" (p. 22).

To these declarations of policy we may add two comments made later by close observers of banking trends in the United States. "The attitude of the reserve authorities and of bankers generally toward gold imports in these years was one of apprehension and anxiety. Far from being viewed as advantageous and desirable, they were regarded as abnormal, temporary, and a menace to financial stability. Bankers generally viewed with misgivings the development of a structure of credit upon them, considering it probable that within a short time the reestablishment of Europe upon the gold basis, together with economic recovery, would result in the recall of a substantial portion of this gold, thereby possibly requiring a drastic contraction of credit in the United States."¹ "To have treated the incoming gold as the equivalent of gold received through the operation of the balance of payments between countries on a full gold standard and to have built a credit structure on it—assuming that it was possible to do it—would have meant first an enormous inflation, and later, when other countries began to rebuild their gold reserves, either a world-wide deflation or the establishment of entirely new standards of the relationship between the world's gold reserve and the outstanding volume of credit."²

It is clear, therefore, that neutralization of gold imports, though in part it occurred "automatically," was a deliberate policy, and that there were sound and compelling reasons for it.

In the five years after 1924, the gold stock of the United States changed little on balance, but the changes that occurred in it from year to year were invariably accompanied by opposite changes in domestic federal-reserve-bank assets. Thus the offsetting tendencies

¹ George E. Roberts, in *Selected Documents on the Distribution of Gold* (League of Nations Gold Delegation, 1931), p. 46.

² Charles O. Hardy, *op. cit.*, p. 83.

of the early 'twenties remained in operation, though on a less extensive scale. In fact, the position which had developed in the early 'twenties "made it possible to ignore the gold movements to an extent quite unparalleled in the history of central banking."¹ Throughout the period 1925-1929, the Federal Reserve System's ratio of gold to sight liabilities was about 70%—and more often above than below 70%—compared with the legal ratio of 35% on deposits and 40% on notes in circulation. There was, of course, a considerable expansion of credit during that period. Currency circulation plus individual commercial-bank deposits per dollar of gold in the United States rose steadily from \$10.64 in 1924 to \$14.13 in 1928, dropping off slightly to \$13.39 in 1929.² But this was due in only a very minor degree to a net increase in the Federal Reserve Banks' domestic credit; it was mainly due to a more economical use of the credit base through a shift from notes to commercial bank deposits and, within the latter, a shift from demand to time deposits. These facts together with the statements and actions of the central banking authorities would certainly make it difficult to interpret the credit expansion of 1925-1929 as a delayed reaction—of the kind described earlier in general terms—to the gold imports of 1921-24.

In the United Kingdom, during the six years following the return to gold in 1925, the published returns of the Bank of England point to a systematic policy of neutralization. In a report to the Gold Delegation of the League of Nations, the evidence was summarized as follows: "An inspection of the Bank return shows that the Bank has attempted, within certain broad limits to stabilize the total volume of credit available to the English economic system by offsetting the gold losses by an increased holding of securities, and, at times when gold was flowing in fairly freely, offsetting the increased supplies of gold by a reduction in its earning assets." This is particularly clear from a consideration not of calendar years, but of certain selected periods when gold flowed in or out. "Thus, between the second quarter of 1926 and the third quarter of 1928, the deposits of the Bank of England varied only by £4 million. This small variation in the aggregate deposits of the Bank was, however, accompanied by an increase of £38 million in the reserve of the banking department, and by a reduction of £36 million in the holdings of securities by the Bank. Similarly, between the third quarter of 1928 and the last quarter of 1929, the gold holdings of the Bank of England fell by £31 million, whilst the securities increased by £21 million, the deposits fluctuating only by £3 million. Again, between the last quarter of 1929 and the third quarter of 1930, the gold holdings of the Bank rose by £19 million, whereas the securities had fallen by £22 million. The long-run intention of the Bank is, therefore, fairly clear; it is to maintain

¹ Charles O. Hardy, *op. cit.*, p. 179.

² A. D. Gayer, *Monetary Policy and Economic stabilisation* (2nd edition), p. 105.

deposits at a fairly steady level, while adjusting its assets in either direction according as gold flows in or out. Over the whole period since the return to the gold standard, however, there has been a tendency for deposits to fall, and to this extent it may be argued that the Bank of England has been pursuing a deflationary policy. That this policy has not affected the position in a more marked manner is due to the fact that the joint-stock banks have altered the ratio of cash holdings at the Bank of England to their deposits, the average yearly ratio between 1925 and 1929 having fallen from 11.78% to 10.77%. The aggregate deposits of the joint-stock banks have in fact, risen from a yearly average of £1,662 million in 1925 to a yearly average of £1,800 million in 1929, though the effect of this increase in the volume of deposits has been to some extent counteracted by the tendency of time deposits to grow at the expense of current account deposits.”¹

The experience of France after the *de facto* stabilization of the franc in 1926 affords another example of neutralization—a striking example but a peculiar one in certain respects. After a long period of exchange depreciation, capital flight, budget deficits and State borrowing from the central bank,² the advent of the Poincaré government in July 1926 and the energetic measures taken by that government to balance the budget restored confidence to such an extent that, after a brief but rapid recovery, the exchange value of the franc could be stabilized by the Bank of France as from December 1926. The restoration of confidence meant a wholesale return of French flight capital to France; and the stabilization of the exchange rate involved purchases by the Bank of France of large amounts of foreign exchange and gold, the counterpart of the returning flight capital. Confidence in government finance having been restored, the francs created by these purchases were largely invested in government securities: the owners of the funds either bought government securities themselves or, by depositing the funds with their commercial banks, made the banks more liquid and enabled them to purchase government paper. The government, in turn, was thereby enabled to repay a large part of its debt to the Bank of France and, later, even to accumulate a substantial deposit balance at the Bank. This change in government accounts with the central bank was due not only to the shift in the holding of government debt from the Bank to the market, but also—though to a relatively minor degree—to the budget surpluses realized in the years immediately preceding and following the legal stabilization of the franc in 1928.

In this way the increase in the central bank's gold and exchange

¹ Sir T. E. Gregory, in *Selected Documents on the Distribution of Gold* (League of Nations, 1931), pp. 27-28.

² These developments are briefly surveyed in Chapter V (“Exchange Fluctuations”), Section 3 (“Freely Fluctuating Exchanges”).

reserves was to a large extent neutralized. From the end of 1926 to the middle of 1928, the increase amounted to over 30,000 million francs; and about two-thirds of it was offset by a reduction in the Bank's advance to the government.¹ In addition there was some decline in the Bank's non-government loans and discounts and some accumulation of deposit balances by a newly established Government Fund for Debt Amortization,² so that the Bank's note circulation and sight deposits rose by only 6,500 million francs or little over 10% during this period. In the second half of 1928, after the revaluation of the gold reserve in June of that year had wiped out what remained of the Bank's current advances to the government, the government deposits at the Bank increased (from 6,500 million francs to 12,200 million) by an amount equal to two-thirds of the increase in the Bank's gold and exchange reserve during that time. To the extent that neutralization occurred through the growth of government deposits at the central bank, it cannot, of course, be observed from a mere comparison of the bank's international and domestic assets.

Was the neutralization deliberate or automatic? It may be regarded as automatic in the sense that both the growth of central international reserves and the repayment of government debt to the bank of issue were due in the main to one common cause—the revival of confidence, which made Frenchmen sell their foreign assets and invest the proceeds in French government securities. The Bank of France welcomed this movement, but had no active part in it. The reduction which it made in its discount rate (from $7\frac{1}{2}\%$ to $3\frac{1}{2}\%$) had practically no effect on its commercial portfolio since the influx of gold and foreign exchange rendered the market so liquid that there was very little demand for central-bank credit. The Bank had no legal authority to undertake open-market purchases of securities, by which the effect of the incoming gold might have been intensified. The reduction in the Government's debt to the Bank was at bottom equivalent to an open-market operation, since it meant essentially a *shift* in the holding of pre-existing government debt from the Bank to the market. Unlike an ordinary open-market operation, however, it did not come about at the Bank's initiative; and above all, being a "sale" instead of a purchase, it took place in the opposite direction to that which the "rules of the game" would have required. The "rules of the game"—a convenient but, of course, over-simple label—would have required an inflation of domestic credit to reinforce the effects of the gold inflow; but the country had just emerged from a period of inflation and was not in the mood for more.

¹ According to the Annual Report of the Bank of France for 1928 (p. 33), the Bank's net current advance to the Government amounted to 13,600 million francs on June 25th, 1928, compared with 35,400 million at the end of 1926.

² *Caisse autonome d'amortissement*, set up in 1926 for the management of the short-term public debt.

The gold reserve ratio of the Bank of France rose from 47% in 1929 to 80% in 1934, compared with the 35% prescribed by law. No appreciable increase in the Bank's domestic assets occurred until 1935; indeed, from 1931 to 1934, domestic assets declined.

The great expansion in the Bank's domestic assets which started in 1935 cannot, of course, be interpreted as a delayed response to the previous increase in the gold reserve. In some ways the French experience of 1935-38 was just the reverse of that of 1926-28. Just as the inflow of gold and foreign exchange in the earlier years had been due to repatriation of funds and a surplus on current account, so the gold exports of 1935-38 were due mainly to a flight of capital combined to some extent with a deterioration of the trade balance arising, at first, from the overvaluation of the franc and, later, from a sharp increase in domestic wage-costs. Just as the fall in domestic assets of the Bank of France in 1926-28 had been due to government debt repayment, so the increase in 1935-38 was due mainly to government borrowing at the Bank. But this borrowing, in contrast to the debt repayment earlier, did not represent a mere shift in the holding of government debt from the market to the Bank; it was a net addition to the total debt, and was almost entirely used to meet budget deficits.

From the end of April 1935 (when a precipitate capital flight set in just after the devaluation of the belga) up to the end of April 1938 (when the Daladier government had come into power and a return flow was about to begin) the outflow of gold withdrew about 48,000 million francs from circulation, while at the same time 46,000 million francs were placed into circulation through government borrowing at the Bank of France.¹ The two thus almost exactly offset each other. The increased demand for currency which arose from the general advance in wages and prices, reflected in the growth of the note circulation from 82,400 million to 98,500 million francs over the three years, was met partly by an increase in the market's indebtedness to the Bank and partly by government spending of some of the revaluation profit on the Bank's gold reserve.

If we recall the circumstances of the time it is clear that the neutralization of the enormous gold exports from France during this period was a result, not of central banking policy, but of a whole range of fiscal, social and political contingencies. To some extent there seems to have been—here again—an “automatic” relationship between the fall in international and the rise in domestic central-bank assets, rather than a deliberate offsetting policy. The relationship seems to have been reciprocal: capital flight and gold exports caused a stringency on the money market and so forced the government to borrow from the central bank instead of from the market; this borrowing itself, on the other hand, sustained and promoted the outflow

¹ Cf. *Money and Banking* 1937/38, Vol. I, pp. 52-55, and *Money and Banking* 1938/39, Vol. I, pp. 49 ff.

of capital by putting funds into circulation which could be used for the purchase of gold. In the circumstances in which the borrowing started (June 1935) the relationship may have been chiefly of the former kind, while on later occasions, especially in 1937, government spending out of central-bank loans may have been a primary influence contributing to the loss of gold.

Events similar in some ways to the French experience of 1936-38 took place in New Zealand during those years. From the end of 1935 to the end of 1938 the exchange reserve of the Reserve Bank of New Zealand declined by £(NZ) 16.7 million, and this decline was almost exactly offset by £(NZ) 16.5 million of government borrowing at the Bank. An outflow of private funds, especially in the latter part of the period, was an important cause of the reduction in the central currency reserve; but, to a greater degree than in France, the reduction was also due to a deterioration of the foreign trade balance which in turn was largely a result of government expenditures on public works and social services combined with the introduction of a forty-hour week. Unlike France, New Zealand maintained the exchange value of her currency in those years, at any rate in relation to sterling, but ended by adopting exchange control in December 1938.

Neutralization of disequilibrating capital movements was indeed quite common throughout the nineteen-thirties. In 1931-32 such movements occurred on a large scale through withdrawal of foreign credits as well as flight of domestic funds, adding greatly to the difficulties which agricultural debtor countries experienced through the worsening of their terms of trade. In a large number of countries, international currency reserves were in consequence sharply reduced; and the reductions were almost invariably offset by increases in domestic central-bank assets. Thus in Denmark, Germany, Italy and Sweden in 1931 the increase in the latter was nearly as large as the decrease in the former; in Austria, Czechoslovakia, Finland, Hungary, Norway and Roumania, the rise in central banks' domestic assets was even substantially greater than the fall in gold and foreign exchange in that year; and the same was true of Chile, Greece and Uruguay in 1932 (see Table 1, Appendix IV). But it is important to remember that in many of these countries the loss of central currency reserves was accompanied by domestic bank failures and other events leading to a loss of confidence in commercial banks and a wholesale conversion of bank deposits into cash. The expansion in central banks' domestic assets was often simply the reflection of a hoarding demand for bank notes and, to that extent, failed not only to expand total credit but even to prevent it from contracting.

In some of the receiving countries—notably France, the Netherlands, Switzerland and the United States—there was at that time a similar tendency to convert deposits into bank notes; and even where the central bank, as in France and the Netherlands in 1931, increased

its domestic concurrently with its international assets, this did not, in the circumstances, ensure any net expansion of credit. We may also recall a point made in Chapter II: in so far as the central currency reserves lost by debtor countries consisted, not of gold, but of foreign bills and deposit balances in such centres as New York or London, and were lost to these same centres through the calling in of short-term loans, etc., the result was not a transfer but an extinction of international currency reserves; the reduction in central banks' international assets in the losing countries was not matched by an increase in central banks' international assets in the receiving countries.

Later in the 'thirties, the neutralization of gold movements arising chiefly from "hot money" transfers became a familiar practice in certain receiving countries. In the United Kingdom this proved to be one of the main functions of the Exchange Equalization Account. In the United States, the influx of gold in the four years after 1933 was largely neutralized at first through the accumulation of excess reserves by the commercial banks and later, in 1936-37, through the increase in legal reserve requirements and the gold sterilization scheme initiated by the Treasury in December 1936.

The desire of both losing and receiving countries to offset the effects of international currency transfers arising from "hot money" movements needs no explanation. In view of the erratic, massive, unpredictable and unproductive character of these movements, the desire was not unnatural. The funds in question, being unresponsive to interest rates, were exceedingly volatile, and it is understandable that receiving countries should have wished, as a safeguard against a possible outflow of such funds, to accumulate large gold reserves which could be released without undue disturbance to the credit system.

There existed, however, certain obvious limits to the neutralization of gold movements, irrespective of whether these movements arose from "hot money" or from discrepancies in current payments. In the gold receiving countries, on the one hand, the amount of offsetting that could be done by the central bank was ultimately limited by the amount of the bank's domestic assets.¹ Once those assets were reduced to or near zero, a central bank could do nothing to offset a further increase in its international reserve. As noted before, this was the case at times in such countries as the Netherlands and Switzerland, and the neutralization proceeded largely outside the central bank through the piling up of idle cash reserves by commercial banks.² A

¹ Where these assets were not in a saleable form (consisting, *e.g.*, of book credits or advances to the government rather than of marketable public securities), this was another circumstance which in practice tended to limit the scope of neutralization, even though the substitution of marketable for non-marketable government securities in the hands of the central bank should not have presented any insuperable difficulty.

² Sweden may be mentioned as another example. During the six years 1932-37, the Riksbank's international assets rose by 1,268 million kronor (compared with a

similar situation developed in the United States after 1933. True, the Federal Reserve Banks continued to hold over \$2,400 million of government securities. But even if they had disposed of them entirely, this would not have been enough to offset the gold imports or to absorb the excess reserves of the commercial banks which rose to over \$3,000 million in 1936. From August 1936 to May 1937, most of these excess reserves were "frozen" by increases in legal reserve requirements. In September 1937, when the total monetary gold stock of the United States reached a temporary maximum of over \$12,700 million, about \$4,200 million of that stock had been "sterilized" outside the central banking system (\$1,200 million by the Treasury's "inactive fund" and \$3,000 million by the increased reserve requirements). At the same date, about £475 millions' worth of gold had been sterilized in the United Kingdom, an amount far larger than the total domestic assets then held by the Bank of England (about £310 million). In fact, only £75 million of that amount had been offset through reductions in the Bank's fiduciary issue, the rest having been sterilized by the Exchange Equalization Account.¹

As was mentioned earlier, France in 1928 was able to neutralize some of the increase in the central bank's international assets through an increase in government deposit balances at the bank. But the principal means of neutralization beyond the limits encountered by purely central-bank policy has been the machinery of Exchange Stabilization Funds, which will be discussed in Chapter VI.

In countries that were losing international currency reserves, on the other hand, neutralization was subject to limits that could not be evaded in this way. The ultimate limit was, of course, the complete exhaustion of the gold or foreign exchange reserve, while the central banks' legal reserve requirements formed an even closer, though less absolute, limit. If one or the other of these limits was reached or in process of being reached, the issue was either exchange depreciation or exchange control. These two types of policy, which will be reviewed in Chapters V and VII respectively, could not be avoided except by stopping both the neutralization process and the loss of currency reserves through contraction of domestic credit.

Practically all countries sooner or later depreciated their exchanges during the 'thirties, and a large number of countries introduced exchange control. Yet some of them made resolute attempts at credit contraction before—and sometimes even after—these measures were

surplus of 863 million in the current account of the Swedish balance of payments over that period), while its domestic assets fell by 514 million kronor. In the latter part of the period the bank's domestic assets were so small—amounting to only 3% of international and domestic assets combined in 1937—that only a minute fraction of the inflow of international currency reserves could be offset by the central bank itself. At the same time, however, the commercial banks' cash reserves increased by 450 million in absolute amount or, in proportion to total deposits, from 3.8% at the end of 1931 to 15.3% at the end of 1937.

¹ Cf. *Money and Banking* 1937/38, Vol. I, p. 19.

adopted. Thus in 1930, the effects of decreases in gold and exchange reserves were intensified through reductions in domestic central-bank assets in a number of countries, including Bulgaria, Colombia, Germany, Hungary, Italy, Poland and Roumania (see Table 1, Appendix IV). Such reductions, though frequently due in part to sales of government securities or repayment of loans by the government, reflected in the main a fall in the market's demand for credit as a result of the depression, and occurred, in fact, in the great majority of countries at that time. This tendency was in many countries sharply interrupted by the banking crises and currency hoarding of 1931-32.

One of the countries just mentioned—Bulgaria—presents the exceptional case of a positive correlation between international and domestic central-bank assets over a period of seven consecutive years (1929-1935). In the first four of these years (1929-1932) the movement was downward; the central bank lost more than half of its gold and exchange reserves, and reduced its domestic assets concurrently by about the same absolute amount. The reduction in international assets took place entirely in the foreign exchange reserve, which fell to an insignificant amount at the end of this period, while the gold reserve remained unimpaired at a relatively high level. The Bulgarian authorities considered that any decrease in the gold reserve would be a dire calamity, and their extreme reluctance to part with any gold may have accounted to some extent for their determination to compress domestic credit. The loss of reserves was indeed arrested at the end of the four years, but how far this was due to deflation and how far to a tightening of exchange restrictions cannot be exactly determined.

The experience of Poland also deserves special mention. Poland was one of the few countries that succeeded in enforcing a severe monetary deflation in the face of foreign credit withdrawals while maintaining the gold value of the currency without any general exchange control up to April 1936. But the deflation came about without much active pressure from the central bank. While the gold and exchange reserve was more than halved during the four years 1930-1934, the bank's domestic assets showed little change on balance. It was the commercial banks which, faced with a loss of cash, played a leading part in the contraction of credit, cutting down their bill portfolio by two-thirds and their advances by one-third over that period. The country's current balance of payments improved considerably up to 1934. In the following year deflation was abandoned, and exchange control was introduced shortly afterwards.

Denmark presents an interesting illustration of the limits of autonomous credit policy in a small debtor country. Having both devalued the currency and imposed exchange control in 1931, Denmark embarked in 1932 on a vigorous credit expansion through interest reductions and open-market operations, and pursued it for over two years.

As the exchange control was rather liberal in respect of commercial transactions, this expansion led to a marked deterioration of the current balance of payments and was consequently offset to some extent by a sharp fall in the central bank's net international assets. In the summer of 1935 it was clear that a turning-point had been reached; a drastic revision of policy was called for. There was considerable agitation on the part of agricultural exporting interests in favour of further devaluation. But as employment was active and prices were rising, the authorities decided against devaluation; and once this decision was made, the only alternative was to put a brake on the monetary expansion. The central bank raised its discount rate and proceeded to tighten credit by reducing its large security holdings. The drain on the currency reserve promptly ceased and gave way, in fact, to an increase from 1936 on.

A similar though less difficult turning-point came in Australia early in 1936. The various recovery measures taken at the bottom of the slump in 1931-32 were succeeded by a quick and substantial revival in economic activity and national income. But in 1934-35 the domestic expansion was beginning to strain the country's international position. The current balance of payments turned adverse, and the banking system lost a large part of its sterling reserve. The brake was applied in February 1936, when the Commonwealth Bank offered Treasury bills for sale to the public, and there was an immediate rise of interest rates in consequence. In taking this step, "the Commonwealth Bank wished to obtain information as to the possibility of an open market for treasury-bills, and was not averse from any resulting contraction of credit, because it wished for some restriction of imports to lessen the strain on London funds."¹ The outcome, as in Denmark, was an improvement in the balance of payments and an increase in currency reserves. Both Denmark and Australia benefited from a general buoyancy in export markets during 1936-37; but there is no doubt that the measures referred to had some effect in restoring the external currency position of these countries by keeping domestic conditions in step with the world market.

On the whole, such measures were comparatively rare, particularly in the later 'thirties. In 1936 there were only three countries—Austria, Hungary and South Africa—where a reduction in gold and foreign exchange reserves was accompanied by a reduction in domestic central-bank assets. In 1937 and 1938, there were a number of countries that suffered a loss of gold and exchange reserves; but there were none that did not offset it by an expansion of domestic central-bank assets (see Table I, Appendix IV).² To be sure, positive corre-

¹ *Report of the Royal Commission to inquire into the Monetary and Banking Systems at present in operation in Australia* (1937), p. 213.

² In the Netherlands, the apparent reduction in domestic assets accompanying the fall in international assets in 1938 was due to a reduction in advances to the Ex-

lation between international and domestic assets of central banks was relatively frequent in the later 'thirties, particularly in 1936; but in the great majority of cases it was due to an *increase* in both classes of assets (see Synopsis on p. 69 above and Table 1, Appendix IV). One might have thought that the extraordinary growth of the world's gold supply at that time would have increased the scope for neutralization—as it certainly did—and that it would have increased the frequency of negative correlation accordingly. The actual increase in the frequency of positive correlation after 1933 could hardly be interpreted as a sign of closer adherence to the "rules of the game." A simpler and more probable explanation would be that the expansion in the gold supply coincided with a desire of monetary authorities in many countries to promote recovery from the great depression. Neutralization has never been an end itself, but rather an expression of national monetary "autarchy"¹ of which the more advanced forms have sometimes been exchange depreciation and exchange control. And on occasion it may well suit the purposes of an autonomous national credit policy to allow a gold influx to have an expansive effect or even to strengthen that effect by domestic operations.

As already indicated, during the last year covered by our table—1938—no country that experienced a fall in its external currency reserve failed to offset it in part or in whole. Owing to the recession of business activity in certain important markets, such as the United States and the United Kingdom, there occurred a worsening of the current balance of payments and a reduction in central reserves in a large number of countries, including the Argentine, Australia, Estonia, India, Lithuania, New Zealand, Peru, Poland, Portugal and Sweden; and in all of them central banks' domestic assets were increased during that year. It will be noticed that nearly all these countries are highly dependent on the export of agricultural products, and it is interesting to note the manner in which their monetary authorities met a situation arising from cyclical change in the demand for and the prices of such products.

The turning-point of the cycle occurred in most cases about the middle of 1937. Thus the exchange reserve of the Australian Commonwealth Bank reached a high point in June 1937 and declined steadily in the following eighteen months, even though the flow of capital from New Zealand tended to check the decline to some extent. The export boom in the preceding eighteen months (1936/37) had provided the Bank with more than enough external funds to meet the decline, and during the adverse phase (1937/38) the Bank acquired

change Stabilization Fund. These advances, which had increased *pari passu* with the rise in the central bank's gold reserves in the two preceding years, were in reality not a "domestic" asset, but served to finance the gold purchases of the Fund and changed in accordance with the Fund's gold holdings.

¹ *I.e.*, self-government (as distinct from "autarky," *i.e.*, self-sufficiency).

domestic securities to an amount twice as large as the reduction in the exchange reserve.

But it is the Argentine which affords the most striking example of cyclical neutralization in both boom and recession during the three years 1936-38. Here again the middle of 1937 was the turning-point. The changes in the world market affected the Argentine balance of payments with particular violence since they were reinforced by an inflow of foreign funds before and an outflow after the turning-point, as well as by weather conditions producing a bumper crop before and a harvest failure immediately after. The repercussions of these events on the domestic credit situation were surprisingly small, owing to the remarkable policy of monetary "insulation" adopted in the export boom as well as in the slump. The inflow of foreign exchange in 1936 and the early months of 1937 was sterilized at first through the sale of Treasury bonds by the Central Bank and after November 1936, when these had been sold out, through the issue of Treasury certificates and bills to the market for purchases of exchange on government account. The latter, naturally, were not reflected in the Central Bank's balance-sheet. The total exchange absorbed in this way reached a maximum of over 1,000 million pesos in June 1937, and this amount proved sufficient to meet the outflow. During the eighteen months after the middle of 1937, foreign exchange was released from the official holdings which had been accumulated outside the Central Bank, and the Treasury bills and certificates which had been issued to finance these holdings were repaid. The Central Bank offset a part of the decline in its own gold and exchange by repurchasing some of the Treasury bonds it had sold previously. Thanks to the neutralization policy the expansion in bankers' cash, deposits and currency circulation in 1936/37 had been moderate in comparison with the boom in the export trade and the influx of funds. In the same way the contraction in domestic credit during 1937/38 was slight in comparison with the reversal in the balance of foreign payments.¹

At the same time the Argentine neutralization policy made it possible to maintain a high degree of exchange stability compared with the degree of fluctuation in the balance of payments. Throughout this period the official buying rate was kept unchanged at 15 pesos to the pound. The free market rate, it is true, depreciated by over 10% early in 1938; and the official selling rate, affecting the bulk of the import trade, was raised from 16 to 17 pesos to the pound in November 1938, so as to widen the spread between buying and selling rates and thereby to finance the payment of export subsidies (which had been suspended two years earlier when the selling rate had been lowered from 17 to 16 pesos to the pound).

The Argentine experience suggests that, to be effective, neutraliza-

¹ For a more detailed account of these developments, see *Money and Banking of "countries"* with those of individuals. 1938/39, Vol. I, pp. 62-63 and Vol. II, pp. 10-12.

tion must start in the boom, so as to provide a sufficient reserve for the slump. By contrast, Peru, for example, failed to neutralize the gold and foreign exchange acquired in 1935/37; and in 1937/38, when she lost a large part of it (a loss which, unlike the gain, she did offset), she suffered a 20% depreciation in the exchange value of her currency. In New Zealand, similarly, neutralization during this period was one-sided; and so in December 1938 resort was had to exchange control.

The one-sided working of neutralization in agricultural countries is understandable. Agricultural countries, being in general relatively poor, have usually been eager to spend their foreign exchange receipts at once, and have been reluctant to build up large liquid reserves for use in bad times. A poor country may naturally prefer progress to stability.

There is probably a wide measure of agreement that for countries dependent on a narrow range of agricultural export products, the policy of neutralization—if countries feel they can afford it—is an appropriate means of mitigating the effects upon the domestic credit situation of violent cyclical price fluctuations in the world market.¹

But many would probably regard the case of agricultural countries as an exceptional one. Objections have frequently been raised against the practice of neutralization on the general ground that the corrective forces tending to restore equilibrium in the balance of international payments are thereby put out of action or at any rate weakened. If a discrepancy arose in the current balance of payments and if the resulting gold movement were prevented from having a depressing effect on prices and money demand in the losing and a stimulating effect in the receiving country, the discrepancy and the gold movement would tend to persist and might sooner or later lead to a collapse of exchange stability or to the suppression of free inter-convertibility of currencies.

¹ Buffer stocks of primary products have often been suggested as a remedy for such price fluctuations, and they may be the only remedy if the fluctuations in investment and national income in the leading industrial countries—generally taken to be the source of cyclical change—cannot be eliminated. There is a certain analogy between such buffer stocks, which would smooth out the demand for and steady the prices of primary products, and the buffer stocks of international means of settlement which in the absence of commodity buffers make it possible for agricultural-exporting countries to cushion the effect of world price fluctuations on their internal economy. Both involve the question of choice between progress and stability. The commodities held in buffer stocks are unproductive, and the world would be better off if they were consumed; they are in this sense a "waste" (though if they lead to a reduction in private speculative stocks, they might reduce the total "waste"). In the same way, the holding of buffer stocks of international currency by primary producing states implies that, taking good years with bad, these countries forego importing a certain amount of goods and services. In both cases the satisfactions foregone include not only the capital value of the initial stock but also the interest that it would yield if employed productively.

There is not only a theoretical analogy but also a practical connection between the two types of stock. If the industrial consuming countries were to operate commodity buffer stocks, the primary producing countries would clearly have less need for monetary buffer reserves.

cies. Even if the gold movement were due to capital flight, neutralization in the losing country would feed the flight by continually replacing the funds absorbed by the sale of gold, thus removing the check which might otherwise develop through a shortage of liquid balances.

The Macmillan Report, for instance, ascribed "the instability of post-war international finance" in part to the fact that "movements of gold have ceased of late to have what used to be considered their 'normal' effect on the domestic credit policy of certain countries, notably France and the United States. In recent years it has been impossible to rely on action being taken by both the country losing gold and the country gaining gold to preserve international equilibrium, the one meeting the other half way. . . . Formerly, it was assumed that the efflux and influx of gold itself produced a new equilibrium by altering the level of prices in the lending and receiving countries respectively and thus modifying, through an alteration in exports and imports and through the short money market, the debtor position of the first and the creditor position of the second. Gold standard countries were indeed supposed to meet each other half-way, each altering its conditions sufficiently to bring about the desired equilibrium."¹

In the Report of the Gold Delegation (League of Nations, 1932), we find such passages as the following: "Measures to counteract the influence of the movements of gold, though . . . they may be desirable in exceptional circumstances, are and should be recognized to be fundamentally in contradiction with the gold-standard system" (p. 50). "There must be adequate assurance that what is sometimes called the 'rules of the game' of the gold standard will be observed—that is to say, that gold will be allowed to move freely and will not be unduly accumulated in any country without being allowed to exercise its normal influence in raising the level of prices" (p. 70). "Open-market operations . . . should be employed rather to intensify than to deaden the semi-automatic influence of gold movements" (p. 51).²

The role of central bank policy in the adjustment mechanism of the balance of payments will be considered in Section 5 below. So far we have mainly dealt with the facts as reflected in central banks' balance sheets; and the facts certainly suggest that throughout the inter-war

¹ *Report of the Committee on Finance and Industry* (London, 1931), paragraphs 153 and 185.

² It is interesting to note that the Gold Delegation at the same time urged a reduction in the legal reserve requirements of central banks so as to "free the hands of the Central Banks by enlarging the free margin of their gold reserves which they can use for international payments without endangering the legal minimum ratio," to "give the Central Banks adequate freedom and flexibility in their conduct of credit policy" (Report, p. 53) and "to allow Central Banks the liberty of action which is necessary for the conduct of a rational credit policy" (Second Interim Report, p. 17). Since the "rules of the game" admit little "liberty of action," it must be presumed that such liberty was to be reserved for the special circumstances such as crop failures, financial difficulties, in which, according to the Delegation, offsetting operations might be advisable.

period neutralization was the rule rather than the exception. The statements just quoted refer to the working of the gold standard but they could, of course, be applied more generally to any system of stable and unrestricted exchanges; to shifts in foreign exchange reserves as well as to movements of gold. After the breakdown of the gold standard system in 1931, essentially the same problems reappeared wherever and whenever exchange stability was maintained *de facto* or *de jure* between any two or more countries—between the countries of the sterling area, for instance, or between countries with a fixed price for gold; and there is in fact no strong indication that the offsetting of changes in central banks' currency reserves was much less common before 1931 than after.

There is nothing automatic about the mechanism envisaged in the "rules of the game." We have seen that automatic forces, on the contrary, may make for neutralization. Accordingly, if central banks were to intensify the effect of changes in their international assets instead of offsetting them or allowing them to be offset by inverse changes in their domestic assets, this would require not only deliberate management but possibly even management in opposition to automatic tendencies.

3. DISTRIBUTION OF RESERVES

With so much neutralization, it is natural that great changes should have occurred in the distribution of gold and exchange reserves between countries during the period under consideration. Had it been the usual practice of currency authorities to intensify rather than offset the effects of transfers of gold and exchange reserves, the underlying discrepancies in balances of payments would have been reduced or closed more promptly and the transfers of international currency would accordingly have been on a smaller scale. Generally speaking, if any country suffering a loss of gold were to resist that loss by domestic credit contraction and if any country gaining gold were to expand credit at once, the existing pattern of gold distribution would tend to be perpetuated. Conversely, any extensive redistribution of gold reserves could be accomplished only if the effects of gold movements were offset for a time in either the losing or the receiving country or in both. Such a redistribution would, of course, require an appropriate alteration in balances of payments (through capital movements or changes in exchange rates or variations in prices, incomes and money supplies); but once the necessary discrepancy in the flow of payments had been created, the ensuing transfer of currency reserves would have to be neutralized until the desired new pattern of distribution were established.

The changes in the distribution of central banks' exchange reserves were illustrated in the two previous chapters, dealing with the gold exchange standard and the sterling area respectively. Gold formed

throughout by far the greater part of international currency reserves in the aggregate. The following remarks are therefore confined to the distribution of gold; but it should be borne in mind that any general forces affecting gold distribution tend in the same manner to affect the distribution of exchange reserves.

The principal facts concerning the distribution of the world's gold reserves and the growing unevenness of that distribution are apparent from Appendix IV, Table 2, showing the central gold holdings of various countries at five-year intervals since 1913. It will suffice to recall the circumstances attending some of the major shifts.

After the war of 1914-18 the first major shift was the gold flow to the United States. That flow had begun during the war; but of the total net increase in the central monetary gold stock of the United States from 1914 to 1924, more than half occurred in the four years 1921-24. At the end of 1924, the gold stock was over three times larger than in 1914; and the percentage share of the United States in the aggregate central gold reserves of the world in 1924 (46%) was twice as high as it had been in 1914 (23%). The increase in the U.S. gold reserve from 1914 to 1924 (\$4,090 million) was greater than the world output of new gold in that period (\$3,800 million), but at the same time over \$2,000 million of gold was added to total central reserves through the withdrawal of gold coin from circulation. The conditions underlying the movement of gold to the United States in the years 1921-24 and the way in which the movement was neutralized were indicated in the last section.

In the next four years (1925-28) the U.S. gold stock did not increase further; the reserves of the United Kingdom and of smaller creditor countries such as the Netherlands, Sweden and Switzerland also remained practically constant; and it was only in 1928 that France began to accumulate gold on a large scale. Accordingly this period witnessed a wider dispersion of gold supplies; a number of debtor countries, including the Argentine, Austria, Brazil, Germany, Hungary and Poland were able to increase their holdings.

But in the late 'twenties another major shift in distribution took place, namely the absorption of gold by the Bank of France; and soon after that had stopped in the early 'thirties, there started a movement of gold to the United States which dwarfed all earlier shifts and rendered the maldistribution of currency reserves ever more acute.

France held 8% of the world's gold reserves at the end of 1926. By 1931 she had increased her share to 24%. As stated earlier, the level at which the franc was stabilized in 1926 led to a large surplus in the French balance of payments on account of trade and current services. During the four years 1927-30 the surplus, expressed in old U.S. dollars, amounted to \$1,492 million. At the same time the gold and exchange reserves of the Bank of France increased by as much as

\$2,210 million; for, in addition to the current account surplus, there was an inflow of capital reflecting in the main a repatriation of private funds previously held abroad. The surplus on current account disappeared after 1930, while the inflow of funds continued for a time.

It may be of interest to recall that during the period of capital flight and exchange depreciation prior to 1927, France's central gold reserve had remained untouched; the outward transfer of capital had taken place in "real" terms through the alteration in the current balance of payments induced by the depreciation of the franc. By contrast, the subsequent inward transfer was effected largely in the form of gold. Thus, the repatriation of capital involved not a return of gold previously lost, but a net addition to the French gold stock.¹

The gold movement to the United States which started after the devaluation of the dollar in January 1934, was almost wholly due to "hot money." During the five years 1934-38 the net current-account surplus of the United States (610 million new dollars), though by no means insignificant, represented only 8% of the net increase (amounting to 7,850 million new dollars) which occurred during those years in the U.S. monetary gold stock. The share of the U.S. gold stock in the world total rose from 34% at the beginning to 57% at the end of this period.

If we consider the position in March 1939—the last peace-time date for which the reserves of the British Equalization Account are known—we find that the United States, holding 57% of the world total, together with France (11%), the United Kingdom (10%) and four other creditor nations (Belgium, Netherlands, Sweden and Switzerland, with a combined share of 10%) held 88% of the aggregate monetary gold reserves in the world. Ten years before they had held 62% of the world total (the U.S.A. 38%, France 13%, the United Kingdom 7% and the four others 4%). Owing largely to "hot money" movements the relative position of some of these countries during the intervening period showed, of course, considerable changes, such as the steep decline of the French reserve after 1934 and the growth of the British share to 16% of the world total in March 1938, followed by a rapid fall in the ensuing twelve months.

All countries other than the seven creditor nations mentioned suffered a sharp decline not only in their combined share but even in the physical volume of their total gold reserves between March 1929 and March 1939. Most of this decline, however, is accounted for by three countries—Germany, Italy and Japan.

How did this growing inequality in the distribution of gold compare with the needs of different countries for international currency reserves? "Needs," of course, are not easy to ascertain in any objective manner. Thus it might be argued that in so far as gold was used

¹ As was shown in Chapter II, the exchange reserves acquired by the Bank of France after 1926 were eventually turned into gold.

as a medium for "hot money" transfers the receiving countries—being unwilling to subject their economies to the violent fluctuations which otherwise might have been necessary—"needed" the incoming gold as a reserve against subsequent withdrawals of these funds. International currency reserves are required for meeting any temporary balance-of-payments discrepancies which it is not worth while to correct by measures such as exchange-rate adjustments with all their disturbing effects on trade and production. And the abnormal capital movements which took place in the 'thirties, largely within the narrow circle of creditor countries, were certainly a very important factor creating such discrepancies.

Even the more "normal" movements of long-term capital from creditor to debtor countries have, in the past, tended to create a need for currency reserves. For the rate of lending has usually been subject to wide fluctuations from year to year; and if a borrowing country wished to stabilize its importing capacity it had to set aside reserves to meet any temporary decline or cessation of the capital flow.

Agricultural exporting countries have usually been in need of relatively large reserves, not only because of fluctuations in foreign lending, but also because of the seasonal nature of their exports, the year-to-year fluctuations in their crops and the wide cyclical fluctuations in the prices of their products on the world market.

The variability of the balance of payments of different countries or types of countries should be capable of statistical demonstration if complete and reliable data were available. For most countries such data are lacking. We may illustrate the point very roughly on the basis not of the balance of payments as a whole, but simply of the balance of trade. Thus, if we consider the annual trade statistics of eighteen representative countries during the five-year period 1925-29, we may take simply the differences between the most "favourable" and the least "favourable" yearly trade balance (that is, between the highest export or lowest import surplus and the lowest export or highest import surplus), express those differences as a percentage of the average annual imports during that period and so obtain the following indications of the relative range of variation in the balance of trade:

Netherlands	5%	Australia	28%
Switzerland	5%	Finland	28%
Italy	7%	Argentina	29%
Belgium	10%	Germany	30%
United Kingdom	10%	India	33%
Czechoslovakia	11%	New Zealand	34%
Sweden	11%	Hungary	36%
United States	15%	Canada	52%
France	18%	Netherlands Indies	65%

The eighteen countries, chosen at random, fall into two contrasting groups. The first, showing the lowest degree of trade-balance fluctuation during the period selected, includes mainly industrial creditor countries. All of the countries in the second group were at that time borrowing countries and, excepting Germany, exporters of primary products. If international currency reserves had been distributed according to needs arising from trade fluctuations, countries in the second group should on the average have held reserves more than proportionate to their share in world trade.

But "need" is only one of the factors determining the size of a country's monetary "buffer stock." The conditions governing the holding of international currency reserves by nations are at bottom similar to those governing the holding of cash balances by individuals. In both cases we may distinguish between (a) the need for such reserves (the possible range of balance-of-payments fluctuations or, more generally, of discrepancies between receipts and outgoings); (b) the will or inclination to hold them (desire to be protected against emergencies or, more generally, desire for stability); and (c) the ability to hold them (the level of wealth, the extent to which more vital desires are satisfied).¹

A rich man can afford and will probably want to hold a large idle cash reserve, while a poor man will not. In the same way a poor country is less likely than a rich one to sacrifice potential imports and to tie up some of its limited wealth in an international cash reserve. A reserve which a rich country may consider just sufficient may seem a luxury to a poor one. A debtor country, if its exports are adequate to meet essential import requirements, could reduce its interest burden by using its liquid currency reserves for the repayment of foreign debt. This interest cost, which is equally present when the alternative is not debt repayment but foreign investment, is the price paid for protection against the instability associated with freely fluctuating exchanges—the instability due, among other factors, to the risks of trading, the frictional unemployment and the continual shifts of productive resources between home-market and export industries in response to short-term exchange variations. No one would suggest that poor countries are insensitive to economic instability. But just as in the course of time economic progress in a given country tends gradually to create a demand for greater stability, so at any given time different countries with different levels of real wealth and income are unlikely to attach the same value to stability as compared with greater immediate satisfaction of urgent material needs. Some countries may not

¹ The behaviour of "countries" in respect of their currency reserves expresses itself in the behaviour of their central bankers or other monetary authorities; and the behaviour of the latter is influenced in turn by the pressure of public opinion, by political organs, by business interests, by the domestic demand for credit, by import requirements, etc. It is in this sense that one may compare the behaviour and motives of "countries" with those of individuals.

feel they can afford to hold the amount of reserves necessary for the maintenance of exchange stability.

Owing to the great variability of their balance of payments, agricultural-exporting countries would seem to have an objective "need" for relatively large reserves of international currency; but being relatively poor, they have generally been reluctant to keep or build up such reserves in adequate volume and to forego much-needed imports from abroad. Unless their vital import requirements are met by other means, the poorer countries are not likely to hold reserves sufficient to meet their balance-of-payments fluctuations from year to year. The same may be true of countries impoverished by war, as was shown by the experience of many European states after 1918.

It is these general circumstances relating to the comparative wealth and needs of different nations that have tended to defeat and, so long as they persist, are liable to defeat any attempts to redistribute the international currency reserves through loans made in the form of gold, stabilization credits or overdraft facilities. The gold, if that is the form in which such loans are made, is likely to be spent and so to return to its former owners. If the spending is not subject to the lenders' control and not earmarked for specific productive purposes, loans such as those made for the various currency stabilization schemes in the nineteen-twenties may prove a wasteful method of capital supply or relief. Only if an adequate flow of international development or reconstruction loans is forthcoming can one expect poor or impoverished countries to set aside adequate reserves for stabilizing their balance of payments. Without some change in the basic conditions relating to the comparative wealth and needs of different nations, the experience of the past offers little hope of preventing or rectifying a "maldistribution" of currency reserves.

The difficulty lies in the fact that the distribution of international reserves appropriate or necessary for the working of a system of free and stable exchanges is unlikely to correspond to the equilibrium levels of liquid reserves from the point of view of the individual countries, particularly when the general political predilections of some of the countries concerned lead them to set less store by free and stable exchanges than others. Thus the fact that the distribution of reserves was highly unequal in the later 'thirties does not in itself prove that it did not represent an equilibrium position from the point of view of the individual countries concerned, given the existing structure of basic conditions. The agricultural debtor countries, for instance, could presumably have acquired more gold by importing less machinery, equipment, clothing, etc.; and if they did not do so, it is presumably because they preferred machinery, equipment, clothing, etc., to gold. Germany, Italy and Japan could presumably have retained some of their gold reserves; but they apparently considered it more important to exchange them for the materials they needed for

war and preparations for war. The group of creditor nations could have relinquished some of their gold in return for larger imports or remunerative investments abroad ; but they apparently wished to maintain freedom of capital movements between them and, being reluctant to subject their domestic credit systems to violent disturbances, preferred to keep and use the gold largely as a counter for "hot money." The United States could presumably have exchanged its gold for commodity imports by reducing its tariff, appreciating the dollar or increasing its national income ; but the first two methods might have affected domestic employment while the third seemed to encounter difficulties and might even have required, if it was to be sufficient, a great and disturbing inflation of domestic prices.

Indeed, for each country there exists at any time a normal or equilibrium level of international liquidity from its own point of view, a level determined by the various factors governing the need, the desire and the ability to hold reserves of international currency. This does not mean that the actual distribution of reserves in the 1930's represented an equilibrium situation for each individual country. On the contrary, there were always some countries trying to adjust the actual amount of their reserves to what they considered their equilibrium level. A country can change its reserves only by creating a "gap" in its balance of payments (a deficit if its actual reserves exceed and a surplus if they fall short of the desired equilibrium level). The gap is required only temporarily : it must last just long enough to enable the redistribution of reserves to take place. But a deficit or surplus in one country's balance of payments means a surplus or deficit in another's ; and if the aggregate amount of international liquidity remains the same, one country's reserve can only increase at the expense of another's. All lasting shifts in the distribution of international liquidity therefore necessarily involve changes in terms of trade or inducements to invest, sufficient to render the changes in currency reserves desired by one country acceptable to the others.

4. CENTRAL BANK'S RESERVE REQUIREMENTS

In the light of the preceding observations on the function and distribution of international currency reserves, what was the significance of the legal stipulations by which central banks were required to keep a minimum reserve of gold or foreign exchange equal to a certain proportion or a certain amount of their domestic liabilities (notes in circulation or notes plus sight deposits) ?

It is clear, in the first place, that the amount of international currency a country needs does not depend at all closely on the amount of its domestic currency and credit ; it depends on its liability to suffer fluctuations in the balance of external payments. The particular criterion of "need" implicit in the system of reserve requirements was not a strictly relevant one.

Above all, gold or foreign exchange which the law required to be held as "cover" for domestic money could not at the same time be used for external settlements. The legal minimum reserves were not readily available as international currency. The effect of the reserve requirements was to withhold a certain amount of gold or foreign exchange from the "international currency function" and to set it aside for quite another function, the "cover function." The aim in view may have been to oblige central banks to keep adequate international reserves so as to maintain constant convertibility between domestic and foreign money; yet this was "rather like saying that in order to ensure that there shall never be a shortage of taxicabs, a certain proportion of taxicabs in existence must always be standing on the ranks."¹

Only the surplus over and above the legal cover was available for use as international currency. In practice even the surplus was not always available in whole. For fear of having to break the law, central banks endeavoured usually to keep a "cushion" above the legal minimum. With a reserve ratio of 33%, for instance, the cushion desired might be another 7%; and this cushion often tended to be virtually immobilized like the legal minimum itself, though of course less rigidly.

To be sure, the manner in which even the legal minimum itself was immobilized was not by any means absolute. By reducing the liabilities against which the cover had to be held (notes in circulation or notes plus sight deposits) a central bank could release some gold or foreign exchange from the cover function; and this did not even necessarily involve a deliberate deflation policy: any outflow of "surplus" gold or foreign exchange, unless offset, tended to withdraw a similar amount of notes or deposits and so to lower the amount of gold or foreign exchange required as cover.

Moreover, in several countries (including Austria, Chile, Czechoslovakia and Hungary) the central bank could let its reserve fall temporarily below the legal minimum subject to the payment of a tax. In Denmark and South Africa the statutes required no tax in this case but a special government permit. In Salvador the central bank's discount rate had to be raised by $\frac{1}{2}\%$ for each 1% by which the reserve fell short of 30%.

In practice, however, provisions such as these made little if any difference. The primary object of the required reserves was to maintain the public's confidence in the national currency. With any minimum ratio laid down by law as a norm, any infringement of it, even if permitted by the statutes in exceptional circumstances, was liable to upset confidence and was therefore generally regarded as something to avoid.

¹ D. H. Robertson, in: Pigou and Robertson, *Economic Essays and Addresses*, p. 197.

The primary object of the reserve requirements was to maintain confidence in the currency. A certain amount of gold or foreign assets appearing constantly in a bank's balance-sheet was in itself something that seemed to inspire confidence. More important was probably the fact that the reserve requirements imposed a limit on monetary expansion, a limit on the amount of notes (or notes plus sight deposits) which the central banks were empowered to create.

These considerations carried great weight in many countries especially after the inflationary disturbances of the early 'twenties. In consequence, the reserve-ratio system was "more generally adopted than before the war, and frequently in a more rigid form."¹

Clearly the value of cover requirements as a means of preserving confidence depended largely on psychological factors and cannot be assessed in concrete terms. It has been pointed out, however, that "so long as the world is not disturbed by wars or other disastrous events, the cover of bank-notes is of very little concern to the public, whereas, in the event of such a disturbance, even a cover of 100% would not be possessed of the power to preserve confidence."² Even a purely metallic currency is no absolute safeguard against debasement and depreciation. A paper currency in normal times gains little if anything by having a legal "backing" of gold or foreign assets; while in abnormal times the cover regulations have usually had to be suspended, repealed or relaxed in any case.

The precise level of the legal reserve ratios in various countries was largely the outcome of convention, habit and reluctance to depart from general practice. Before 1914 the ratio system was not as common as it became later. England, Italy and a few other countries operated a system under which, beyond a certain "fiduciary" issue, all notes had to be covered in full; and the note-issue of the Bank of France was limited by a fixed legal maximum. In 1875, however, Germany adopted a gold cover ratio of 33⅓%; the Netherlands had one of 40%; and in the United States the Federal Reserve System was set up in 1913 with a minimum ratio of 35% against deposits and 40% against notes. The example of the Federal Reserve System, in particular, seems to have had considerable influence on central bank statutes in other countries. France and Italy adopted a ratio of 35% and 40% respectively in the late 'twenties. By that time, indeed, the great majority of central banks (apart from those of England, Finland, Norway and Japan adhering to the fiduciary-issue system) were subject to legal reserve ratios ranging from 30 to 50%.³ Among the

¹ Gold Delegation, *Second Interim Report* (League of Nations, 1931), p. 13.

² Gold Delegation, *Selected Documents* (League of Nations, 1930), p. 66.

³ In some measure the effective requirements varied, of course, according to whether or not they applied to central banks' sight deposits as well as notes outstanding. In most countries they applied to both; but there were still a number of countries, including Australia, Denmark, England, Germany, Japan, Norway, Spain, Sweden and Switzerland where they applied only to notes. The extent to which

very few countries with ratios of less than 30% were Austria, Czechoslovakia and Hungary, and even they had passed legislation requiring a gradual increase to over 30%. Evidently the force of convention was strong, and if there had been any currency with only a 10% legal cover, it would probably have been considered less sound than one with a legal cover of, say, 50%.

In 1930 the Gold Delegation of the League of Nations suggested in its first interim report that the legal minima could be reduced "without in any way weakening the general credit structure" and that it would be desirable to carry out such a reduction by common international agreement. Similar suggestions were made in the Delegation's later reports and at the London Monetary Conference in 1933. An international agreement on the subject was never reached, but the declarations referred to facilitated the reductions which were in fact accomplished by a number of debtor countries anxious to make use of some of their immobilized cover reserves in order to meet the strain imposed on their balance of payments by the depression. Thus the note cover was lowered in the Argentine from 100% to 40% in December 1929; in Australia (temporarily) from 25% to 15% in June 1930; in Denmark from 50% to 33⅓% in October 1931. In Germany and Greece, the reserve requirements were suspended in July 1931 and April 1932 respectively. Later, the cover ratios were reduced in several other countries, including Bulgaria (from 33⅓% to 25%), Ecuador (from 50% to 40%), Latvia (from 50% to 30%) and the Union of South Africa (from 40% to 30%).

Moreover, there was a marked trend of opinion against the very principle of reserve requirements. In the United Kingdom the "Macmillan Committee" recommended in 1931 that "just as the amount of gold held by the Bank should be settled independently of the volume of the note issue, so any precautionary limits which it may be thought advisable to set to the Bank's power of note issue should be settled independently of the amount of gold which it is required to hold. The best form of limitation on the discretion of the Bank of England in regard to the volume of its note issue, is, we think, the system which prevailed in France for many years before the War, namely, an absolute maximum subject to modification from time to time by law or by Treasury Minute."¹

In 1932, a minority of the League of Nations Gold Delegation suggested "abolishing all legal stipulations with regard to minimum gold reserves of the Central Banks."²

The Australian Banking Commission in 1937 recommended that "the statutory provisions which require the Commonwealth Bank to

foreign exchange was eligible as legal cover in addition to or instead of gold was indicated in Chapter II above.

¹ Committee on Finance and Industry, *Report*, paragraph 327.

² *Report of the Gold Delegation*, p. 71.

hold gold or sterling in proportion to the amount of Australian notes on issue should be repealed"; and that "the note issue should be limited by law to a fixed maximum (for example, £60 million) subject to the right of the Bank to exceed the maximum by a stated amount (for example £10 million) with the consent of the Treasurer."¹

As was mentioned in Chapter I, the only countries which prior to 1939 abolished their reserve requirements altogether were Germany and Italy; and they not only freed their cover reserves in this way but actually expended the greater part of them.

In view, however, of the widespread and persistent practice of neutralization during the inter-war period, it is clear that the link between central banks' international reserves on the one hand and domestic currency and credit on the other had become loose if not inoperative. The measures and tendencies which prevailed in general were such as to offset the domestic effects of shifts in international currency reserves; and this meant that legal reserve ratios had little if any influence on the money supply in individual countries. The trend of opinion in the matter of reserve requirements was evidently in accord with the trend of fact.

The ease with which in this situation reserve requirements could be altered without any disastrous repercussions on the state of confidence was illustrated in the United Kingdom early in 1939. At the outset the amount of notes that could be issued without gold backing was £200 million. By February this "fiduciary issue" had been raised to £400 million in connection with a transfer of gold from the cover reserve of the Bank of England for use in the Exchange Equalization Account. In March it was lowered to £300 million in connection with a revaluation of the Bank's remaining gold cover. Such great and rapid changes in the legal gold backing would hardly have been possible if the principle of cover requirements had not lost some of its former prestige.

It may be added that practically all of the Bank of England's remaining gold cover was transferred to the Exchange Equalization Account in September 1939; but this was naturally a measure of war economy and not of monetary reform.

5. ADJUSTMENT OF THE BALANCE OF PAYMENTS

As we observed in Section 1, the "classical" view of the adjustment mechanism assigned an important role to central banks as instruments for changing the volume of domestic money in accordance with the balance of international payments. An active or passive balance, accompanied by an inflow or outflow of gold, was normally supposed to result in an expansion or contraction of the domestic money supply; and this expansion or contraction was expected to bring about a rise

¹ Royal Commission to inquire into the Monetary and Banking Systems in Australia, *Report*, paragraph 580.

or fall in the level of domestic costs and prices tending, in the former case, to stimulate imports and discourage exports or, in the latter, to discourage imports and stimulate exports. Gold flows, changes in the quantity of money and changes in relative price-levels thus appeared as the principal factors in the mechanism of adjustment.

Empirical investigations, however, have in several important cases failed to yield a conclusive verification of this theory of the adjustment process. Frequently the adjustment has been observed to take place in a smoother and less roundabout manner than that envisaged by the traditional doctrine. It is sufficient to recall such well-known studies as those of the French international accounts by H. D. White, of Germany's position in the nineteen-twenties by C. Bresciani-Turroni, of British trade and foreign lending before 1914 and of the U.S. balance of payments after 1918 by F. W. Taussig.¹ The last named authority, himself a leading proponent of the "classical" view, concluded his survey as follows:

"The actual merchandise movements seem to have been adjusted to the shifting balance of payments with surprising exactness and speed. The process which our theory contemplates—the initial flow of specie; the fall of prices in the lending country, rise in the borrowing country; the eventual increased movement of merchandise out of the one and into the other—all this can hardly be expected to take place smoothly and quickly. Yet no signs of disturbance are to be observed such as the theoretic analysis previsions. . . .

"One thing . . . stands out in the British phenomena. This is the unmistakably close connection between international payments and the movements of commodity imports and exports. And this closeness of connection, striking in the case of Great Britain, is found again and in the other countries also. . . . The recorded transactions between countries show surprisingly little transfer of the only 'money' that moves from one to the other, gold. It is the goods that move, and they seem to move at once. . . . The presumable intermediate stage of gold flow and price changes is hard to discern, and certainly is extremely short."²

From the modifications which have in consequence been made in the traditional theory of the adjustment process, a more realistic and comprehensive explanation has gradually emerged.³

Among the less significant of these modifications is that concerning

¹ Cf. Harry D. White, *The French International Accounts 1880-1913*; C. Bresciani-Turroni, *Inductive Verification of the Theory of International Payments*; F. W. Taussig, *International Trade*.

² F. W. Taussig, *International Trade*, pp. 239 and 260-261.

³ Certain aspects of the "modern" theory can be traced far back to early nineteenth-century writers. Of the large body of present-day literature on the subject only a few examples need be mentioned, such as B. Ohlin, *International and Inter-regional Trade* (1933); Barret Whale, "The Working of the Pre-War Gold Standard," in *Economica* (1937); R. F. Harrod, *International Economics* (2nd ed., 1939).

the means by which, in the operation of the gold standard, balance-of-payments discrepancies were currently *settled*, as distinct from the mechanism by which they were eventually *eliminated*. It was found that gold movements were small and infrequent relatively to the gaps which continually arose in the international accounts. The explanation is simple. To a large extent the gaps were filled by equilibrating movements of private short-term funds in response to interest differentials or slight exchange variations within the gold points. More particularly, they could be filled by sales or purchases of foreign bills and balances held as reserves—instead of or in addition to gold—by commercial banks as well as central monetary authorities; and, like gold movements, such sales or purchases were capable of affecting the domestic money supply. Thus even under the gold standard—the prototype of a regime of stable exchange rates—there were, besides gold, other means of covering international discrepancies; these other means were quantitatively important; in a stable-exchange regime not based upon gold they would clearly be all-important.

But these various possible “stop-gaps” are by nature temporary and do not constitute a real adjustment. What is it that really closes the gaps? To this question experience and reflection have suggested a new answer, which serves not to invalidate but rather to complete the answer formerly regarded as adequate. The main point is that any active or passive balance of current transactions arising in a system of stable exchanges tends directly to expand or contract the total flow of money income within a given country. We have already noted that under the gold standard or indeed any system of stable exchange rates, it is the balance of payments which ultimately determines the stock of domestic money in each of the countries adhering to the system. It is important to realize, however, that the balance of payments tends to affect not only the stock of money, but also the flow of income and hence expenditure. The changes induced by the balance of payments in the flow of income and outlay affect, in turn, the demand for imported as well as home-produced goods and so react on the balance in an equilibrating manner. Such changes in income and outlay may occur even if, by offsetting operations, the quantity of money is held constant; in which case they are of course associated with corresponding changes in the turnover rate of the existing money supply.

If, for example, exports increase so as to produce an active balance of current payments, this tends to have the same income-generating effects in the country concerned as an expansion in domestic investment.¹ A rise in exports without a similar rise in imports will gen-

¹ The rise in exports may be due to an increase in foreign demand; but it may also be due to depreciation of the exchange, by which a country secures for its exports a larger share of a given total foreign demand and at the same time tends to divert the expenditure of its nationals from imported to home-produced goods.

erate additional income without at the same time increasing the supply of goods in the country. Of the additional income earned in the export industries, only a small fraction will presumably be spent on imported goods; the bulk will be spent on home-produced goods. Activity increases under the stimulus of this demand; and the recipients of additional income in the home industries will in turn devote some fraction to the purchase of imported goods. In this way the successive spending of additional incomes earned in the first instance in the export trades will tend to produce an increase in total income which in turn will tend to increase imports so as to balance the higher exports. Some part of the additional income will be saved; and if there were no increased investment to absorb this saving, the rise in income would be checked and the adjustment of imports to the increased exports would be incomplete. In fact, however, the rise in current domestic expenditure is likely to induce a higher rate of capital expenditure, which will tend to absorb the additional saving.

The opposite applies in the event of a passive balance; an initial fall in exports tends, by way of a reduction in domestic income, to produce a similar drop in imports. Thus there exists a self-regulating mechanism of adjustment operating through income and effective demand.¹

How, if at all, does the mechanism work in the case of capital movements? It is necessary to distinguish between three types of capital movement. First, loans contracted for the financing of investment expenditure normally bring the mechanism into action quickly and effectively. Some part of the loan proceeds may be spent directly on imported materials and equipment required for the project in hand. That part which is converted into domestic currency and spent on domestic labour and other resources in the borrowing country will both directly and indirectly generate additional domestic income, which in its turn will tend to create a demand for increased imports covered by the foreign borrowing.

Next, consider those equilibrating short-term capital movements which seem to have played so important a role in the working of the gold standard. A country whose balance turned passive was likely to attract foreign funds through a stiffening of money rates or a drop of the exchanges towards the gold export point. A passive balance in itself generally involves contraction of domestic income. The foreign funds moving in will presumably be held in short-term claims and titles; and therefore, even if they prevent a loss of gold and a decrease in the volume of money outstanding, they are not likely to

An illustration of this is provided by the undervaluation of the French franc in 1927-30 (*cf.* Section 6, p. 106 below).

¹ A number of recent writers have expressed this successive-spending analysis in terms of what is called the "foreign trade multiplier." On this, see G. Haberler, *Prosperity and Depression*, 3rd ed. (League of Nations, 1941), pp. 461-473.

have any direct effects on the domestic income flow. They serve as "stop-gaps" until the progressive change in income and demand has brought about a change in imports sufficient to restore an even balance.

Lastly, there are those disequilibrating movements so prominent in recent experience. Apart from their possible effects on the volume of currency and credit, which may be and usually were "offset," these shifts of liquid money capital do not, as a rule, directly influence the flow of income and expenditure; they do not therefore tend to alter the current international balance in a manner promoting their real transfer; and instead of acting as stop-gaps they create new gaps or widen those existing.¹

The vital role of demand conditions in the transfer of capital can be illustrated by reference to Germany's balance of payments, 1924-32. One episode in particular deserves consideration. In 1926 there occurred a sharp decline in the net flow of capital imports into Germany. The German balance of trade—partly through a rise in exports but mainly through a fall in imports—adjusted itself to this great and sudden change with astonishing rapidity. Yet none of the factors stressed by the traditional view seem to have played any part in this adjustment. In the first place, the central bank gained instead of losing gold. It did so, in the main, by purchasing foreign balances from domestic customers who had acquired them by previous borrowings abroad. Secondly, in view of this increase in its reserves, the Reichsbank gradually lowered its discount rate from 9% in January to 6% in July 1926. Thirdly, both note circulation and commercial bank deposits increased during the year. Fourthly, the domestic price-level as reflected in the cost-of-living index was slightly higher than in the preceding year, while in countries such as the United States and the United Kingdom it showed a decline from 1925 to 1926. All this was contrary to the classical mechanism which, in the circumstances, would have called for an outflow of gold, a rise in the discount rate, a contraction of domestic money and a fall in prices. The smooth and rapid adjustment which nevertheless occurred must have been partly due to the fact that the flow of domestic income and demand associ-

¹ Thus in regard to the "hot money" flow to the United States in the 'thirties, a report of the U.S. Department of Commerce makes the following observation: "While internal activity did expand and a small excess of payments on current account did appear from 1935 to 1937, the influx of foreign capital into the United States was apparently not an important factor in these changes. The capital was held largely in liquid form or employed in stock market transactions, and was not directly expended on a significant scale in new investments of an income-generating character. . . . The monetary gold stock of the United States was adequate at all times, even before the revaluation, to support the growth of credit during the 'thirties; and a policy of extreme monetary ease was required and pursued in the interest of business recovery and was not dependent upon the rise in banking balances and gold stocks produced by the influx of capital from abroad." (*The United States in the World Economy*. U.S. Department of Commerce, Economic Series No. 23, 1943, p. 192.)

GERMANY'S BALANCE OF PAYMENTS, 1924-1932
(Reichsmarks, 000,000's)

Year	MERCHANDISE		CURRENT ITEMS				Total current balance	Net capital flow, in (+) or out (-) ^a	Flow of gold and foreign exchange into (-) or out of (+) central reserve ^b
	Exports	Imports	Balance	Reparations	Interest and dividends	Other services			
1924	7,816	9,664	-1,848	- 281	+ 159	+269	-1,701	+2,913	-1,212
1925	9,572	11,934	-2,362	-1,057	- 6	+421	-3,004	+3,240	- 236
1926	10,700	9,883	+ 817	-1,191	- 173	+449	- 98	+ 679	- 581
1927	11,126	14,016	-2,890	-1,584	- 345	+566	-4,253	+4,777	- 524
1928	12,644	13,868	-1,224	-1,999	- 563	+676	-3,110	+3,172	- 62
1929	13,655	13,624	+ 31	-2,501	- 800	+871	-2,399	+2,307	+ 92
1930	12,192	10,548	+1,644	-1,694	-1,000	+521	- 529	+ 494	+ 35
1931	9,637	6,779	+2,858	- 988	-1,200	+445	+1,115	-2,722	+1,607
1932	5,778	4,724	+1,054	- 160	- 900	+258	+ 252	- 489	+ 237

^a In addition to movements classified as long-term and short-term, this item comprises large amounts of unclassified ("undefinable") capital movements calculated as residuals, including differences due to errors and omissions.

^b Including relatively insignificant gold movements on private account.

ated with and resulting from the expenditure financed by foreign loans fell off, thus immediately reducing the flow of imports as well. Indeed a recession in domestic business activity took place in the early part of 1926, which may have been a common influence tending to reduce the demand both for foreign capital and for commodity imports.

The fact that demand was active in most foreign markets at that time was undoubtedly an important condition facilitating the adjustment process. This condition was wholly lacking after 1929 when once again there was a sharp decline in German capital imports, turning into a net outward flow in 1931-32. Exports declined, and a surplus could only be achieved by a still greater drop in imports. Gold flowed out, discount rates were raised, credit was sharply curtailed and prices fell. Considering the slump in foreign demand, the export surplus realized in 1930-32 was indeed remarkable. But it was quite insufficient. The Reichsbank's reserves were drawn upon so heavily that eventually refuge was sought in exchange control. Demand abroad was shrinking; the outflow of funds from Germany was not of a kind that might have directly influenced that demand so as to facilitate the transfer; the funds were seeking safety rather than employment. In these circumstances even the most drastic use of the traditional instruments seemed incapable of securing an even balance.

The equilibrating direct effects of changes in the current balance of payments upon income and demand, discussed earlier in general terms, do not by any means exclude the possibility of other factors helping to restore equilibrium, either through the changes in money supply normally associated with shifts in international currency reserves or through changes in relative price-levels. Thus if an inflow

of gold is allowed to produce its normal effect of expanding the volume of domestic money, the result will normally be a fall of interest rates. This may stimulate not only an equilibrating outflow of short-term funds but even a long-term capital export, so that the active current account will tend to be balanced by a passive capital account.

On the current account of the balance of payments, an expansion of the money supply in response to gold imports can hardly by itself produce any immediate equilibrating reactions; it can in general do so only to the extent that it lowers interest rates and thereby stimulates domestic capital outlay and income. It is only through this stimulus to domestic activity that, incidentally, a higher level of costs and prices may come about by reason of a keener competition for the available means of production. The increased activity itself tends to close the gap by increasing imports and reducing exports. The rise in prices is merely a by-product of the increase in activity. Whether or not such a rise occurs depends generally on the degree of employment and is clearly not an indispensable prerequisite of the adjustment process.¹

As a rule, however, changes in the quantity of money are slow to affect long-term as distinct from short-term rates of interest; and such changes in long-term rates as may come about in this way are usually slow to affect investment activity. In certain recent studies the volume of investment, which often seems to be governed more directly by the course of effective demand, has in fact been found to be not very sensitive to changes in the interest rate.² Whatever the influence of interest rates on domestic investment may have been in earlier times, a distinct and probably important function of interest changes in the gold standard mechanism was to call forth equilibrating short-term capital movements, the real adjustment taking place in large measure through the direct effects of the balance of payments upon income and effective demand in the various countries.

This process of adjustment, incidentally, helps to account for the synchronization of cyclical fluctuations in economic activity under gold standard conditions. A domestic investment boom in one country tends to "spill over" to other countries through its effects on the foreign balance. The country in question is likely to suffer an adverse change in its balance, as part of its increased national income "leaks out" for the purchase of additional imports. The leakage can hardly be greater than the whole additional demand generated at home; in fact it is likely to be smaller; and so the deterioration of the foreign balance, which by itself would be a deflationary influence on national

¹ Cf. Harrod, *op. cit.*, p. 140.

² Cf. J. Tinbergen, *Statistical Testing of Business-Cycle Theories*, Part I (League of Nations, 1939), and H. D. Henderson, J. E. Meade and P. W. S. Andrews in *Oxford Economic Papers*, No. 1 (1938).

income, is not likely to offset more than a part of the increased domestic expenditure. Other countries will experience an improvement in their balance of current payments; the boom is transmitted to them through the higher incomes earned by their export trades, through the successive spending of those higher incomes in their domestic markets and through the increased domestic investment which this spending is likely to induce. Their demand for imports will expand in consequence, and the gap in the balance of payments thus tends to close with the progressive synchronization of internal conditions. Conversely, a slump occurring in one country lowers the demand for imports and tends to cause in other countries a shrinkage of income and investment in both export and home-market industries.

Such are the "automatic" tendencies. But they are apt to be thwarted and counteracted by "autonomous" national income changes in the various countries. The operation of the equilibrating automatic tendencies obviously requires that countries should not attempt to control their national income by deliberate measures. This requirement has come to be less and less adequately fulfilled with the growing concern for stability of income and employment. In these circumstances the adjustment mechanism of the balance of payments has not had full scope for its automatic functioning, and international currency reserves have come to be increasingly needed as "buffers" to settle discrepancies between foreign receipts and payments.

6. THE SEARCH FOR STABILITY

In Section 2 of this chapter it was shown how the domestic effects of changes in gold and exchange reserves tended to be neutralized. As indicated before, the basic reason for this tendency was undoubtedly a desire for greater stability. Each country sought to protect its domestic credit system from the influence of fluctuations originating outside. When the precepts of the gold standard ran counter to the requirements of domestic monetary stability, it was the latter that usually prevailed. Individual countries became more and more anxious to escape the rigours of the world-wide cycle of booms and slumps. Central banks tended to regard sound credit conditions at home as their prime concern. There seemed indeed to be a "fundamental conflict between the principles of central banking and the principles of the gold standard."¹ Without the interposition of national central banks monetary conditions in each country in the gold-standard system would have been governed by the balance of external payments; and it might be argued that it was of the very essence of central banking to introduce an element of "monetary autarchy" so as to soften the impact of external disturbances. Gold and exchange reserves thus

¹ J. H. Williams, "Monetary Stability and the Gold Standard," in *Gold and Monetary Stabilisation* (Harris Foundation Lectures, 1932), p. 148.

came to be used as "cushions," "buffers" or "insulators" instead of acting as "transmitters" according to gold-standard rules.

But it was always easier to neutralize an inflow of gold than an outflow. For one thing, the legal cover requirements enforced a minimum but never a maximum holding of international reserves; and even if no minimum requirements had existed, a depletion of the central bank's reserves always tended to make some deflationary action necessary if the currency was to be kept freely convertible at the existing exchange rate. Moreover, the purely monetary action within the scope of central banking, including particularly the regulation of interest rates, was usually more effective in checking an expansion than in stimulating recovery from depression. For these two reasons there may have been, as has sometimes been asserted, a deflationary bias in the system as a whole.

Neutralization arose largely from the reluctance of individual countries to accept the booms or depressions imposed on them by their balance of payments with the rest of the world. Greater stability of the national economy may have been the aim. The means, however, was not sufficient. Neutralization tended to stabilize the national money supply or at any rate the cash base of the credit system. But to secure greater economic stability, a constant quantity of money is not enough and may sometimes not even be desirable. Regulation of the quantity of money has proved relatively ineffective even in steadying the level of prices. And price stability itself has come to be widely regarded as an inadequate criterion of policy.¹ Emphasis has shifted to the broader criterion of employment and productive activity, and to policies acting on income and effective demand to maintain a satisfactory level of employment.

We have seen that income and effective demand, and hence the state of employment, tend to be directly influenced by the balance of payments even if the quantity of money outstanding is rendered insensitive to gold flows. Thus France's abnormal current account surplus arising from the undervaluation of the franc in the years 1927-1930 undoubtedly strengthened the forces making for depression in the outside world even though in 1929, for instance, losses of central banks' gold and exchange reserves were fully neutralized in a large number of countries (Germany, Italy, Austria, Czechoslovakia, Denmark, etc.; see Table I, Appendix IV). France's current surplus itself, as distinct from the accompanying shifts in currency reserves, affected income and employment adversely in other countries. The case was

¹ Thus the Board of Governors of the U.S. Federal Reserve System in a statement on "Objectives of Monetary Policy," issued in August 1937, emphasized "the inadequacy of price stability as a guide to policy" (*cf. Federal Reserve Bulletin*, September 1937, p. 828). Similarly the Australian Monetary and Banking Commission of 1937 took the view that "price fluctuations are little more than symptoms" and that the central bank, though it should pay attention to them, should not attempt to regulate credit by reference to some selected price index (*Report, op. cit.*, p. 203).

different as regards the other salient feature of the French international accounts at that time, namely, the repatriation of private French balances from foreign financial centres. This had probably little if any direct influence on income and employment; and its effect on the volume of currency and credit in those centres could be, and was no doubt to some extent, offset.

The depressive repercussions of the French current-account surplus might have been compensated if the other countries had not merely neutralized the effect of their gold losses but actually adopted measures to stimulate income and expenditure at home. Such measures were lacking; and cyclical forces tending to depress capital outlay in certain important areas were gathering strength at the very moment when the abnormal state of the French balance of payments would have necessitated a compensating stimulus.

In France itself, the favourable balance of payments had of course a stimulating effect on domestic activity, and so the world depression affected France later than most other countries. In 1930 industrial production in France was still at boom levels, while elsewhere it was falling sharply. The depression provoked a wave of exchange depreciation; but no country succeeded in gaining an advantage comparable to that which France enjoyed during the years 1927-1930.¹ The undervaluation of the franc during those years can scarcely be regarded as a deliberate attempt to stimulate the domestic economy at the expense of the outside world, though no doubt it tended to have that effect; it was rather an accident, a mistake; the equilibrium level of exchange was not easily ascertainable after the violent and largely speculative movements of 1925-26. And no doubt the depressing effects on the rest of the world were small compared with the fluctuations in both foreign and domestic investment in a country such as the United States.

The international repercussions of business fluctuations in the United States may be briefly sketched with the aid of quotations from a study of the U.S. Department of Commerce, entitled *The United States in the World Economy*.² The economic importance of the United States is roughly indicated by the relative weight of 45% attached to it in the League of Nations' world index of manufacturing production on the basis of industrial census and other data for the period 1925-29. No wonder the rest of the world was profoundly

¹ As a natural result of the stimulating effects in France and the depressing effects elsewhere, the undervaluation of the franc as reflected in the current-account surplus diminished each year after 1928, though in 1930 there was still a large surplus, which, however, turned into a small deficit in 1931 (see, e.g., League of Nations, *Balances of Payments 1938*, p. 17). If the equilibrium rate of exchange is defined as that rate which keeps the balance of "normal" payments in equilibrium, the franc thus appears to have been undervalued up to 1930 inclusive.

² By Hal B. Lary and Associates (Economic Series No. 23, U.S. Department of Commerce, 1943).

affected by the turn of events in the United States in 1929 and after. Depression spread by two main routes: "(1) The curtailment and eventual stoppage of the outflow of American capital, which had accounted for 20% of the total supply of dollars in 1927 and 1928 and 14% in 1929, was alone sufficient to create serious problems of readjustment. (2) The decline in economic activity in the United States was sharper and deeper and revival was longer delayed than in foreign countries, which, in conjunction with the new tariff of 1930, produced a particularly severe and prolonged decline in United States imports."¹ The percentage decline in industrial production from 1929 to 1932 was 47% in the United States and 27% in all other countries (excluding the U.S.S.R.).

"One can only speculate as to how much deflation other countries would have had to enforce and endure—if the adjustment had been carried all the way through in this manner. The degree of deflation that would have been required was possibly even greater than that experienced in the United States and certainly far more severe than that which actually occurred abroad."² "Because of the high American standard of living in the late 'twenties the United States was presumably able to stand a sharper depression than other countries, yet the fall in national income from \$83 billion in 1929 to \$40 billion in 1932 was attended by grave social difficulties."³

In fact the rest of the world was unwilling to endure that degree of deflation. Resort was had to other measures of adjustment, including depreciation of exchanges relatively to the dollar and preferential tariff arrangements, quantitative import controls and exchange restrictions. Thus foreign countries endeavoured to balance their account with the United States by measures bearing with particular severity on exports from the United States while encouraging their internal activity and promoting trade among themselves.⁴ Their total imports were in consequence far better maintained than their imports from the United States.⁵

Owing partly to the barriers encountered by United States exports and partly to a recovery in United States imports resulting from the domestic business revival as well as from special factors such as droughts, official silver purchases and reciprocal trade agreements, the United States balance of payments on current account during the three years 1935-37 showed a small deficit for the first and only time in the inter-war period.⁶ The relief thus afforded to other countries proved short-lived. In the latter part of 1937 the United States suffered once more a general recession in domestic business activity, followed immediately by a sharp decline in imports. In the second quarter of 1938, imports into the United States were 47% less than

¹ *Op. cit.*, p. 174.

² *Ibid.*, p. 6.

³ *Ibid.*, p. 177.

⁴ *Ibid.*, pp. 193 and 199.

⁵ *Ibid.*, p. 8.

⁶ *Ibid.*, pp. 192-193.

in the second quarter of 1937; for the whole year 1938 the reduction compared with 1937 amounted to 37%.¹

This time, however, the slump in the United States produced less serious reactions abroad. There was little or no deflation; money was kept cheap; and in a number of countries there was an increasing flow of government expenditure on armaments. Thanks to the rise in the production and value of gold, many countries had large enough gold reserves to draw upon to fill the gap in their balance of payments. Moreover some of the pressure was met by a renewed depreciation of exchange rates in relation to the dollar. The comparative mildness of the 1937/38 depression outside the United States may also be attributed in part to the fact that the recession in the United States, though extremely severe, was quickly arrested. "Vigorous anti-depression action by the Government, including an increase in public works outlays and an expansion of the credit base, were probably the primary factors in checking the downswing; but maintenance of relatively good export markets was also a stabilizing influence."²

Thus the later 'thirties "furnished another manifestation of the unfortunately high degree of instability which has characterized the international transactions of the United States because of the peculiar susceptibility of the domestic economy to wide fluctuation." From this as well as the earlier experience, "it is clear that—whatever may be the other requirements—stability in international economic relations generally and in foreign exchange rates in particular cannot be assured solely or chiefly through technical financial arrangements but must be firmly based on a vigorously and regularly functioning domestic economy."³

As a result particularly of the Great Depression there developed everywhere a keener consciousness of the need to maintain economic activity, while at the same time the limitations of purely monetary policy came to be more fully realized. This attitude may be illustrated by two authoritative declarations published in 1937.

The Board of Governors of the U.S. Federal Reserve System issued a statement on "Objectives of Monetary Policy" which, after defining economic stability as "the maintenance of as full employment of labour and of the productive capacity of the country as can be continuously sustained," put forward the following conclusion:

"To sum up, the Board believes that economic stability rather than price stability should be the general objective of public policy. It is convinced that this objective of public policy can not be achieved by monetary policy alone, but that the goal should be sought through coordination of monetary and other major policies of the Government which influence business activity, including particularly policies

¹ *Ibid.*, p. 197.

² *Ibid.*, p. 198.

³ *Ibid.*, pp. 199-200.

with respect to taxation, expenditures, lending, foreign trade, agriculture and labour.

"It should be the declared objective of the Government of the United States to maintain economic stability, and it should be the recognized duty of the Board of Governors of the Federal Reserve System to use all its powers to contribute to a concerted effort by all agencies of the Government toward the attainment of this objective."¹

The second illustration is from the Report of the Australian Monetary and Banking Commission :

"The general objective of an economic system for Australia should be to achieve the best use of our productive resources, both present and future. This means the fullest possible employment of people and resources under conditions that will provide the highest standard of living. It means, too, the reduction of fluctuations in general economic activity. Since the monetary and banking system is an integral part of the economic system, its objective will be to assist with all the means at its disposal in achieving these ends. . . .

"The Commonwealth Bank should make its chief consideration the reduction of fluctuations in general economic activity in Australia, thereby maintaining such stability of internal conditions as is consistent with the change which is necessary if economic progress is to take place."²

The endeavour to stabilize national economic conditions and to prevent or mitigate depressions must nowadays be accepted as a datum. After the experience of the recent past it is hardly necessary to add that the objective should be pursued and can really be attained only through measures acting directly on national income, investment and effective demand, and not through measures acting on the foreign balance by such means as import restrictions or undue exchange depreciation which, if they initially stimulate employment in one country, generally do so at the expense of the outside world and sooner or later react unfavourably even on the country adopting them.

But the pursuit of national economic stability through domestic income and investment policies may not be compatible with the minimum degree of exchange stability necessary for any orderly system of international monetary relations. The conflict between national and international stability could only be resolved if the various countries spontaneously adopted the same objective—a stable level of good employment—and were generally successful in attaining it, or if they expressly arranged to coordinate and synchronize their policies for the maintenance of economic activity. In a report of the League of Nations Assembly in 1938 the case for such coordination was stated as follows :

"Many countries would prefer today to adopt policies designed to

¹ *Federal Reserve Bulletin*, September 1937, pp. 827-828.

² *Report, op. cit.*, pp. 201 and 204.

increase purchasing power when depressions occurred rather than to impose restrictive measures, were it not for the adverse effects on their balance of payments. This raises the very important question of the international coordination of national anti-depression policies. If, in a spirit of mutual helpfulness, the majority of countries apply them simultaneously during an international recession, the risk of monetary disturbance would be much smaller than it proved to be in the last depression, whereas the chances of causing a real improvement in employment and production would be greater."¹

It may be extremely difficult to secure the necessary correspondence between the domestic policies of a large number of individual countries. In practice, however, what chiefly matters is coordination among the leading industrial countries having an important share in the world market. If these few countries succeeded in keeping their national income at such a level as to avoid depression and unemployment on the one hand and inflationary price increases on the other, the problem would to a large extent be solved.

But even if the various countries deliberately pursued this objective and were in agreement regarding the appropriate domestic measures, it is unlikely that their efforts would meet with equal success. Each country would no doubt encounter special difficulties of its own, political as well as economic. The strength of cyclical forces is likely to vary in different countries. The rate of capital formation, which lies at the root of the business cycle, is very different in different parts of the world. The relative importance of investment industries is not the same in the various industrial states. There are great differences, moreover, in governmental powers, administrative machinery, labour mobility, industrial organization, business psychology, etc.

Differences in cyclical conditions are, therefore, bound to arise even if the general objective of stable and adequate employment is accepted by all and even if some coordination of measures affecting national income and expenditure is recognized as desirable. The resulting discrepancies in balances of payments could then be settled by transfers of international currency reserves in their role of "buffer stocks," without changing the domestic money supply unless the conditions of domestic stability call for it. But this would not be enough. Each country, in the interest of stability in its national income and employment, would need to counteract changes in foreign expenditure on its exports by appropriate inverse changes in its domestic expenditure so as to offset at least the secondary "multiplier" effects of the foreign balance on the domestic income flow. If, for instance, one important country falls into a depression and develops a large export surplus in consequence, it is in this way that the other countries could attempt to prevent that depression from affecting their own internal pros-

¹ League of Nations, *Official Journal*, Special Supplement No. 185 (1938), p. 64.

perity, even though a decline in the prosperity of their export industries would probably be unavoidable.¹

This implies that the latter countries do nothing to change their passive balance, but settle it by a transfer of international currency reserves while counteracting its effects—the effects of the fall in foreign demand—through variations in their domestic expenditure. There is an alternative line of policy for combatting the entry of depression from abroad; that is to attack the passive balance itself, to reduce or prevent it by means of exchange depreciation or import restrictions in relation to the country in which the depression originates.² We shall examine these methods in Chapters V (“Exchange Fluctuations”) and VII (“Exchange Control”); but it may be said at once that there are serious objections to varying the exchange variation for purely temporary purposes, while the objections to the use of import restrictions are plain. The type of action first mentioned—the use of international currency reserves coupled with comprehensive “offsetting” through changes in domestic expenditure—seems preferable in all respects; but it obviously presupposes the existence of adequate buffer stocks of international means of settlement.

Such action may be appropriate in the case of short-term discrepancies. Persistent or persistently recurring disequilibria are liable to deplete the monetary buffer stocks of some country or countries and must be dealt with by a readjustment of exchange rates or by other measures designed to restore an even balance in the international accounts. Any country tending to accumulate an excessive reserve of international currency through a persistent disequilibrium of this sort would probably want to adopt such measures in its own interest, if it had a full understanding of its interest. Foreign investment should be specially mentioned among these measures. If a particular country were subject to a recurrent tendency towards depression, an adequate volume of foreign lending would not merely stop the drain of currency reserves from the rest of the world but would also enable that country to maintain or increase its export surplus and thus to stimulate employment at home without prejudice to employment elsewhere.

¹ The function of international currency reserves in relation to national income and employment policies in a system of stable exchange rates is summarized in general terms in Chapter IX, Section 2.

² This may be termed a “buffer” policy and is to be sharply distinguished from the “beggar-my-neighbour” policy of exchange depreciation or import restriction designed to secure an active balance in order to mitigate a depression originating at home (*cf.* Chapter IX, Section 3).

CHAPTER V

EXCHANGE FLUCTUATIONS

I. EXCHANGE DEPRECIATION IN THE EARLY 'TWENTIES

EXCHANGE depreciation in Continental Europe during the three or four years immediately following the first world war was partly a consequence of the shortage of working capital caused by the war. Many countries in this area emerged from the war with their commodity stocks exhausted—with no raw materials to feed the productive machine and with supplies of foodstuffs inadequate to restore the health and efficiency of the population. There was an intense need for imports to replenish the physical working capital required in order to set the mechanism of production going again. In these circumstances there naturally developed a heavy import surplus and an acute demand for foreign exchange to pay for the foreign commodities. The result was depreciation of the national currencies on the foreign exchange market. In some cases the depreciation was aggravated by other factors, such as pressure to transfer reparation payments. Government inflation due to inadequate taxation, administrative weaknesses, political upheavals, etc., was, of course, the main general influence tending to depress the exchange. But there is no doubt that the abnormally large import surpluses due to capital needs were an important direct cause of exchange depreciation in Europe during the first few years after the war.

These imports were paid for partly by the surrender of such gold reserves and foreign assets as were still available. Withdrawal of coins, for instance, made some gold available for export. But a far more important means of covering the import surplus was the inflow of foreign capital which took place in the early post-war period in response largely to the exchange depreciation itself. At that time there was a strong belief that the depreciation of European currencies was a purely temporary phenomenon due to temporary post-war needs and adjustments, and that these currencies would sooner or later return to their pre-war parities, to those parities which were regarded as inherently "normal" and "natural." Given this state of anticipations, any fall in a currency's exchange value presented an inducement to acquire bank notes, deposits and other assets expressed in that currency. In response to this inducement, foreign funds in fact entered many European countries in considerable volume. The case of the German mark notes acquired by people in England, Sweden, the Netherlands, etc., is a striking and familiar example of this movement. But the capital flow was not confined to monetary assets. At the depreciated exchange rates foreigners seized the opportunity also to purchase all kinds of real estate, residential as well as industrial.

In this way the exchange depreciation caused by acute and abnormal import demands served an important function in attracting the capital funds needed to pay for the materials and foodstuffs imported.¹ The balance of payments was brought into equilibrium by a capital influx after each successive fall in the exchange. The equilibrium was temporary. The stimulus of depreciation had to be repeated: after a while, the exchange had to decline still lower in order to attract the necessary capital imports. In the intervening periods the decline was slowed down or completely arrested. Sometimes, indeed, the capital inflow was large enough to cause a temporary recovery of the exchange rate. Such a recovery occurred in many European countries, including even Germany, for a year or more after the spring of 1920. This particular recovery seems to have been partly due also to the steep price-fall of staple products on the world market, which temporarily reduced the European importing countries' need for foreign exchange. A corresponding decline took place during this period in the exchanges of raw-material producers outside Europe (*e.g.* the Argentine, Brazil and Chile). The fall in agricultural prices may help to account for the fact that the exchanges of some Eastern European countries, such as Bulgaria and Poland, also showed a decline at that time, instead of recovering temporarily as they did elsewhere in Europe.

After this episode the currencies of Continental Europe, except those of the former neutral countries, continued to depreciate by successive stages. As the process went on, however, the stimulus to capital imports rapidly weakened. A return to pre-war parities became more and more unlikely. Government inflations drove up domestic prices and costs with increasing speed. As people began to realize the one-way character of the movement, anticipations of further depreciation became a dominant influence on the exchange market. At that point exchange depreciation lost its power to attract foreign capital. Instead, it set afoot a cumulative process of capital flight. As funds moved out to take refuge abroad, pressure on the exchange market was increased and the rate of depreciation accelerated, which resulted in a further loss of confidence and a further flight of capital. In its effects on the balance of payments the capital flow became disequilibrating instead of equilibrating. The depreciation of one currency was apt to be taken as an example of the fate that might befall others; and so the flight from the French franc, for instance, became particularly acute after the collapse of the German mark.

In these circumstances, one country after another had to adopt drastic measures, with or without foreign help, to stop the decline and to stabilize the exchange rate. Depreciation having exhausted its

¹ For a theoretical as well as descriptive discussion of this phenomenon, see J. J. Polak, "European Exchange Depreciation in the Early Twenties," in *Econometrica*, April 1943.

power to attract foreign funds, it was necessary for a country in need of capital to restore confidence in the currency and to attract credits from abroad by the more normal method of interest differentials.

All the currencies of Continental Europe except the Scandinavian countries, the Netherlands and Switzerland were stabilized at a fraction and sometimes only an infinitesimal fraction of their former value.¹ In consequence, the foreign funds which came in during the earlier stages of the depreciation proved largely a gift to the countries concerned, except to the extent that they were invested not in monetary assets but in physical property.

We have observed that the early post-war depreciation of European currencies was in part a result of the shortage of working capital and that for a time it served a useful purpose in attracting foreign funds needed to pay for essential commodity imports. That does not mean that exchange depreciation was a good means of achieving this purpose; in the end, as we have seen, it became quite ineffective. It may have been the only means in the particular conditions of the time. But conditions would have been different if stabilization measures had been adopted immediately after the war on an international scale; if movements of private funds could thus have started at once in response to the normal inducement of interest rates; and if adequate intergovernmental relief and reconstruction schemes had been arranged by concerted action.

Even though part of the foreign capital that came in under the stimulus of exchange depreciation proved ultimately a gift, it was purchased at the heavy cost of increased domestic disturbances—monetary and social—consequent upon the external depreciation of the currency. It may be true that the initial need for working capital in the form of imported food and raw materials would not have transformed itself into effective demand without some initial inflation, arising mostly from budget deficits. But once that demand had become effective on the foreign exchange market, the fall in the exchange rate became literally the leading factor in the mechanism of inflation, driving up the cost of living and creating an irresistible pressure for wage adjustments, which in turn called forth demands for additional currency on the part of the government as well as business men.

Apart from its domestic effects it is clear that exchange depreciation was a fitful and unreliable method of attracting foreign funds to replenish the national working capital, a method depending on the play of speculative anticipations. Before long, indeed, it completely defeated its purpose as the market began to anticipate continued depreciation instead of a return to "normal." The equilibrating type of speculation in the early post-war years was in a sense a product of

¹ The new mark in Germany was equal in gold value to the pre-war mark. But the new unit was adopted for convenience of accounting to replace the old one which had in fact been stabilized at an infinitesimal fraction of its previous value.

pre-war psychology, a product of the long period of comparative exchange stability prior to 1914. After the experience of the inter-war period any attempt to rely once more on exchange speculation of the equilibrating sort would be doomed to instant failure. This makes it all the more essential to devise other methods of meeting foreign capital needs after the second world war.

2. CURRENCY STABILIZATION, 1922-1928

We need not enter into the detailed history of post-war currency stabilization in Europe or into the various methods of stabilization adopted in the various countries. For the purpose of the present survey there is only one general comment to be made on this experience. The stabilization was, from the international point of view, a piecemeal process, carried out by one country after another in a completely uncoordinated manner.

An exchange rate by definition concerns more currencies than one. Yet exchange stabilization was carried out as an act of national sovereignty in one country after another with little or no regard to the resulting interrelationship of currency values in comparison with cost and price levels. This was so even where help was received from financial centres abroad. Stabilization of a currency was conceived in terms of gold rather than of other currencies, and the level of stabilization was commonly expressed as such and such a fraction of the previous gold content of the national currency. "Each country thought of itself as attached to gold rather than as attached to other countries through gold."¹ Perhaps the main reason for this national approach was simply the fact that stabilization, instead of being carried out simultaneously in the various countries, was a piecemeal process extending over a period of six or seven years. To mention one example for each of these years, Austria stabilized in 1922; Germany in 1923; Hungary in 1924²; the United Kingdom in 1925; France in 1926; Italy in 1927; Norway in 1928; Portugal in 1929.³ It may also be that, after the currency disturbances from which they emerged, countries were so anxious to stabilize at any level that it did not occur to them to pay much attention to the level in relation to other currencies or to prices at home and abroad.

Naturally the outcome of this process was not a stable and workable system of international exchange rates. The rates at which exchanges were fixed had been reached frequently under the influence of abnormal short-term capital movements with the result that some currencies were overvalued and others undervalued. "The war left behind it

¹ William Adams Brown, Jr., *The International Gold Standard Reinterpreted 1914-1934* (National Bureau of Economic Research, 1940), p. 386.

² In relation to sterling.

³ These dates refer to *de facto* stabilization. Sometimes the legal measures were taken later.

varying degrees of monetary inflation, and for the first time in the history of the international gold standard some method of establishing a new system of exchange rates between all the most important countries of the world had to be devised. The solution of this problem—the stabilization problem proper—was arrived at by the sovereign choice of independent powers rather than by international agreement, and introduced into a situation already sufficiently complicated a new set of difficulties known as under- and over-valuation of currencies.”¹ From the very start, therefore, the system was subject to stresses and strains. The two most familiar but by no means the only sources of disequilibrium arose from the successive stabilization of the pound sterling and the French franc early in 1925 and late in 1926 respectively, the one at too high and the other at too low a level in relation to domestic costs and prices. The piecemeal and haphazard manner of international monetary reconstruction sowed the seeds of subsequent disintegration. It was partly because of the lack of proper coordination during the stabilization period of the 'twenties that the system broke down in the 'thirties.

A network of exchange rates set up by simultaneous and coordinated international action would have a better chance of avoiding major initial strains and would serve as a better starting-point from which, in case of need, moderate readjustments could be made from time to time. It may be that the initial establishment of a workable system of exchange rates would in future be less hampered by rigid preconceived notions as to the parities to which currencies should return.

3. FREELY FLUCTUATING EXCHANGES

The post-war history of the French franc up to the end of 1926 affords an instructive example of completely free and uncontrolled exchange variations, variations that ended neither in collapse through hyper-inflation nor in a return to par. After the unpegging of the franc-dollar exchange in March 1919 the external value of the franc was determined from day to day by the free play of supply and demand in a market operating without any support or intervention by the Bank of France or the Treasury, except on one occasion early in 1924 when a wave of bear speculation was temporarily arrested by the authorities with the aid of an American dollar credit. The Bank had no right to buy or sell gold except at the pre-war legal parity, and so its gold stock remained inactive and practically unchanged during this period. In the first two or three years after the cessation of hostilities the depreciation of the franc was due primarily to the current account deficit arising from the abnormal post-war import requirements. With the fall in raw-material prices on the world market, the franc recovered during 1921. Depreciation set in again in 1922;

¹ William Adams Brown, Jr., *op. cit.*, p. 780.

and this time it was due increasingly to capital exports prompted by speculative anticipations of a continued fall in the exchange.

Such anticipations are apt to bring about their own realization. Anticipatory purchases of foreign exchange tend to produce or at any rate to hasten the anticipated fall in the exchange value of the national currency, and the actual fall may set up or strengthen expectations of a further fall. The dangers of such cumulative and self-aggravating movements under a regime of freely fluctuating exchanges are clearly demonstrated by the French experience of 1922-26. Exchange rates in such circumstances are bound to become highly unstable, and the influence of psychological factors may at times be overwhelming. French economists were so much impressed by this experience that they developed a special "psychological theory" of exchange fluctuations, stressing the indeterminate character of exchange rates when left to find their own level in a market swayed by speculative anticipations.¹

But the phenomenon of disequilibrating capital movements under conditions of fluctuating exchanges was by no means confined to France. As already observed, it affected in varying degrees most of the other depreciated currencies in Europe in the early 'twenties, once it was realized that a return to par could not be taken for granted. After the breakdown of exchange stability in the 'thirties, whenever exchanges were left to their own fate, such movements again played an important part, affecting, for instance, the American dollar in 1933, the French franc at certain times during 1937 and the pound sterling in the first few months after September 1931. The depreciation of the pound at that time was determined largely by the outflow of foreign funds and that outflow itself was largely determined at any given moment by the prospect of further depreciation. Early in 1932 confidence in the pound returned and a cumulative movement in the reverse direction got under way. It was the realization of the exchange market's inability to maintain a stable equilibrium, at any rate in the short run, that led to the establishment of the Exchange Equalization Fund and thus to the abandonment of the principle of freely fluctuating exchanges. Similar funds were later set up in other countries.² Though in some cases they attracted attention mainly as instruments for the neutralization of gold movements, their chief initial object was exchange stabilization with a view to preventing the disturbing speculative fluctuations liable to arise in a completely free exchange market. In a great many countries, of course, this function of exchange stabilization, after the downfall of the gold standard, was performed not by any special fund but by the central bank in the ordinary course of its dealings in foreign exchange and gold. There was also a group of countries that stabilized the exchange not by

¹ Cf. especially A. Aftalion, *Monnaie, prix et change*.

² See Chapter VI.

influencing demand or supply in the market through a central reserve of international currency, but by replacing the market by a system of rationing and official regulation. Nowhere was the principle of freely fluctuating exchanges practised in the 'thirties over any extended period. A large number of countries lowered the external value of their currencies but proceeded after a short while if not at once to stabilize that value either by means of official sales and purchases or by means of exchange control.

The experience of the French franc from 1922 to 1926 and of such interludes of uncontrolled fluctuation as occurred in certain currencies in the 'thirties demonstrates not only the difficulty of maintaining a freely fluctuating exchange on an even keel, any movement in one direction being liable to create expectations of a further movement in that direction; it also shows how difficult it may be for a country's trade balance to adjust itself to wide and violent exchange variations. It is usually assumed that a depreciation of the exchange acts as a bounty on exports and a duty on imports and thus tends to improve the trade balance. The supply-and-demand conditions necessary for this result may be present normally, but they cannot be taken for granted. It is obvious, for instance, that if a country's demand for imports is highly inelastic, a rise in the cost of foreign currencies may easily lead to a deterioration of the trade balance, especially if foreign demand for the country's exports is also relatively inelastic. Thus in certain circumstances a fall in the exchange will not lead to an equilibrating adjustment in the balance of trade. Study of the facts has not infrequently failed to support the simple view that exchange depreciation improves the balance of trade.¹ If a country produces goods not produced elsewhere and if demand for these goods is inelastic the value of its exports might be increased and its trade balance improved by an appreciation instead of a depreciation of the exchange. Normally, however, a single country's export products compete with similar products of other countries, so that exchange depreciation is likely to improve a country's trade balance by securing for its exports a larger share of the total world demand. The demand for a single country's exports may thus be elastic even if the demand for the type of commodities exported by that country is inelastic as a whole.

In France, exchange depreciation produced at first the normal effect: the import surplus was sharply reduced. The reduction from 1920 to 1921 was partly due to the slump in foreign raw-material prices and was accompanied, as stated before, by a temporary recovery of the franc. But later, when the exchange began to fall again, the improvement in the trade balance persisted, leading actually to an

¹ Cf. Jean Weiller, *L'effet du change sur le commerce*, Part II, examining the effects of exchange fluctuations on the foreign trade of France and other European countries in the early 'twenties. As noted before, however, the intensity of import requirements in the post-war years was abnormally great.

export surplus. One may say, therefore, that the exchange depreciation caused by the abnormal capital outflow tended to bring about the trade adjustment necessary for the real transfer of the capital.

In 1925, however, the tendency changed. The speculative anticipations dominating the exchange market began to affect the market for commodity imports and exports in a similar disequilibrating manner. As the exchange declined, import prices rose; and as import prices rose, traders began to expect a further rise and so reacted by importing more instead of less. Similarly, exporters, expecting the price rise for their products to continue, held back their sales so as to get better prices later. From the early part of 1925 to the middle of 1926 the quickening pace of exchange depreciation produced in consequence a sharp deterioration instead of an improvement in the trade balance, the ratio of exports to imports falling to 93% in the twelve months to June 1926, compared with 107% in the preceding and 105% in the following twelve months. In this concatenation of circumstances the forces governing the exchange market behaved in a completely disruptive fashion. Indeed, the French exchange market developed a state of panic in July 1926. A change in market psychology occurred only when, later in that month, Poincaré came into power announcing various drastic measures. The reversal in sentiment might have produced a cumulative movement in the other direction but for the Law of August 7th, 1926, which enabled the Bank of France to buy and sell foreign exchange at market rates and made *de facto* stabilization possible a few months later. Thus ended a long experiment in freely fluctuating exchange

Other examples could be quoted of trade balances reacting to exchange fluctuations in a disequilibrating manner. The depreciation of the U.S. dollar in 1933, produced mainly by an outflow of short-term funds following an official embargo on gold exports, was accompanied by a fall in the export surplus as foreign buyers held off and American importers speeded up their purchases. In the words of an official commentator, "the rapid decline in the exchange value of the United States currency stimulated heavy buying from abroad in anticipation of further depreciation. . . . The trend in imports appeared contrary to generally accepted international trade theory, but such a trend is in reality logical when the distinction between a *depreciating* and a *depreciated* currency is kept in mind."¹ Similarly the depreciation of the French franc during 1937 was accompanied by a deterioration rather than an improvement in the trade balance. Both in the United States in 1933 and in France in 1937, there were, of course, other factors at play, notably a sharp rise in wage costs. Yet there is no doubt that the speculative anticipations set up by the process of

¹ U.S. Department of Commerce, *The Balance of Payments of the United States in 1933*, p. 9.

exchange depreciation had an important influence on the movement of trade.

The same disequilibrating effect of speculation has also been observed in cases of appreciating exchanges. Thus during 1922, when the gold value of the Czech crown was more than doubled, exports from Czechoslovakia were not reduced, as exporters speeded up their sales in the expectation of still lower prices a few months later. It may also be mentioned that the appreciation of the Norwegian and Danish currencies from 50 and 60% respectively to 95-100% of par during 1924-26, due largely to an influx of speculative funds, was accompanied by a marked fall in the import surplus. The overpowering influence of short-term capital movements was here exerted in the upward direction. The central bank authorities in both countries were known to desire a return to pre-war parity. In Denmark, as a first step towards this goal, a law was passed in December 1924 under which the value of the currency was to be raised from 65% to 70% of par—that is, by a little less than 10%—over a period of two years. This offered a certainty of profit to speculators; foreign funds flowed in and pushed the Krone up by 30% in six months. In Norway also a gradual return to the pre-war parity was openly favoured by the authorities; but, as in Denmark, speculative capital imports by anticipating the process greatly accelerated it. Thus the restoration of the two currencies to the pre-war level was accomplished very rapidly, but only at the cost of serious depression, which at any rate in Norway exceeded in severity the slump of 1929-32.¹ The sharp recovery of the Italian lira from the middle of 1926 to the middle of 1927 is another striking instance of exchange appreciation resulting from a cumulative process of speculative capital imports.

Experience has shown that, apart from exchange control, the only effective means to prevent the disturbing exchange movements we have discussed is direct stabilization of the exchange market by the method of official sales and purchases, of which the gold standard mechanism, the exchange fund technique and the simple "pegging" of rates by the central bank are the principal variants. No doubt the maintenance of stable exchanges by some such method presupposes an appropriate domestic credit policy or at any rate sets certain limits to the freedom of domestic credit policy; but domestic credit policy alone is not a sufficient means of ensuring stability on the exchange market without some measure of direct stabilization. Under a system of freely fluctuating in contrast to one of stable exchanges, an outflow of capital has no tendency to reduce the domestic money supply, and there need therefore be no early check on the outflow through a growing shortage of funds and a rise in interest. Besides, the credit system is usually elastic enough to meet a pressing demand for addi-

¹ Cf. R. A. Lester, *Monetary Experiments*, Chapter IX.

tional exportable funds either out of previously inactive reserves or out of additional bank credits. It is true that in the French experience of 1922-26, the chief illustration used in this section, there was an expansion of domestic currency. This expansion, however, was not necessarily a cause but sometimes rather a consequence of the violent and uncontrolled exchange fluctuations. France emerged from the war with a large internal floating debt. When the decline in the exchange value of the franc began to create anticipations of further decline causing a strong desire to transfer capital abroad,¹ the capital owners obtained the necessary liquid funds by refusing to renew the short-term treasury bills. It was this rather than the current budget deficit that forced the Treasury to borrow from the Bank of France.²

Speaking generally, it is clear that as the public becomes more and more liquid, indirect control of a currency's exchange value becomes more and more difficult. The greater the public's liquidity, the greater the danger of disruptive capital movements and the greater the need for methods acting directly upon the exchange market. In fact, liquidity has everywhere been enormously increased by the anti-depression policies of monetary expansion in the 'thirties and by the needs of war finance since then.

4. THE DEVALUATION CYCLE OF THE 'THIRTIES³

The unprecedented wave of exchange depreciation in the early 'thirties affected all currencies in the world, except certain currencies in Central and Eastern Europe which were kept at the old parities by means of exchange control but not without resort to various forms of concealed depreciation.⁴ Wide and sudden changes took place in foreign exchange rates. Yet one of the facts that stands out from this experience is that monetary authorities in most countries had little or no desire for freely fluctuating exchanges. Some currencies (those of Czechoslovakia, Belgium, Italy, for example) underwent devaluation at one stroke, changing simply the level at which—but not necessarily the method by which—they were stabilized. Others settled down to a new level after a brief interval of uncontrolled fluctuation and were then more or less rigidly stabilized by being attached to gold

¹ There were of course other motives for the capital outflow apart from the exchange depreciation and the speculative anticipations to which they gave rise. In the present context we have concentrated on phenomena peculiar to a regime of freely fluctuating exchanges.

² The budget deficit declined steadily (in milliard francs) from 24.7 in 1922 to 18.1 in 1923, 9.1 in 1924, 4.7 in 1925, turning into a surplus of 0.2 in 1926. The government's debt to the Bank of France, practically stationary from the end of 1919 to the end of 1924, jumped during 1925 from 30.5 to 40.4 milliard francs. The movement of the note circulation was similar; little change from 1919 to 1924 and a jump from 40.6 to 50.0 milliard during 1925.

³ As will be apparent from the text, the term "devaluation" is here used in the sense of exchange depreciation followed by some form of stabilization—rigid or flexible—at a lower level.

⁴ The policies of the exchange control countries will be reviewed in Chapter VII.

or pegged to some other currency or subjected to intervention by exchange funds limiting the freedom and range of variation. The pound sterling was a *freely* fluctuating currency only from September 1931 to the spring of 1932. Yet, though the pound itself was freely fluctuating in terms of the gold currencies during that period, a number of other currencies were pegged to it, thus giving up their own freedom to fluctuate. The United States dollar was a freely fluctuating currency from April 1933 to January 1934.¹ France reverted to a "floating franc" from June 30th, 1937 to May 4th, 1938, though even in this period the exchange stabilization fund created after the devaluation of September 1936 occasionally intervened in the market.

Opportunities for the particular kind of cumulative movements liable to arise under freely fluctuating exchanges were thus limited. Nevertheless, throughout the series of successive devaluations the influence of speculative capital transfers was very great. Whenever the possibility of devaluation came under discussion in any country, a flight of capital would develop, causing losses of gold and making devaluation seem more probable. Sweden, for instance, was forced off the gold standard, only eight days after the United Kingdom, not by any current disequilibrium in the balance of payments but by a sudden outward transfer of funds by both foreigners and nationals who realized that Sweden's exports depended largely on the British market and that therefore the krona might sooner or later have to follow the pound. The flight of capital from France, which started soon after the devaluation of the dollar and grew especially after that of the belga, was largely prompted by the prospect of devaluation, a prospect which materialized after a long delay.

Frequently the extent of devaluation was determined by speculative capital movements. In other words, the level at which official controls stepped in to steady the exchange by one means or another was often reached in quite abnormal conditions. Once devaluation had been accomplished there usually followed a repatriation of funds unless, as in France, the devaluation came to be regarded as only a first step in the downward movement.

Thus the system of flexible exchanges in the 'thirties was associated with disturbances not very different from those associated with freely fluctuating exchanges. In this system, however, gold served to a large extent as a vehicle for "hot money" transfers. Under freely fluctuating paper currencies with no such medium of settlement, the transfer of hot money can take place only through adjustments in trade balances; the adjustments required may be large and sudden; and as we have seen they may fail to come about when speculative anticipations spread from the exchange to the commodity markets, leading to

¹ Official intervention set in during October 1933 in the form of the gold-buying policy; but the quantities bought were small, and the principal effect of the policy was to encourage private speculation against the dollar.

what may be termed "explosive" conditions of disequilibrium. The use of gold in the system of flexible exchanges during the 'thirties no doubt tended in some measure to mitigate the disturbing effects of hot money transfers on the movement of trade.

Enough has been said on the relation between variable exchange rates and short-term capital movements. We turn to some of the broader aspects of exchange fluctuation in the 'thirties. In the first place, we may note that the epidemic of exchange depreciation started—in the latter part of 1929 and at the beginning of 1930—in agricultural countries such as Australia, New Zealand, the Argentine, Brazil and Peru. But there was nothing abnormal in this. Exchange depreciation had long been the usual reaction of agricultural countries to cyclical depressions, which tended to upset their balance of payments through the fall in prices of crude products and through the cessation or even reversal of capital imports. The special problems of agricultural countries will be noted in Section 6.

A more unusual event—an event that marked the collapse of the post-war gold standard—was the suspension of gold payments by the Bank of England and the subsequent fall of the sterling exchange.

When the pre-war gold parity was restored in 1925, a speculative influx of funds anticipating the restoration was instrumental in raising the pound to the required level. The downward adjustment which then took place in the British wholesale price index was in large part an automatic consequence of this rise, since an index such as this is made up largely of internationally traded staple products whose prices in any national market are directly affected by the rate of exchange. The adjustment in domestic prices and costs proved much more difficult; indeed, it proved impracticable. At the level at which it was fixed in 1925 the pound proved to be "overvalued." The strain was later increased by events abroad, notably by the stabilization of the French franc at an unduly low level and, after 1929, by the violent deflation of prices and incomes in the United States. In the summer of 1931, therefore, no less than in the spring of 1925, the pound was "overvalued." The decline of sterling after the suspension of gold payments in September 1931 removed the overvaluation. But the extent of depreciation was determined by abnormal capital movements and bore no relation to the equilibrium of the normal balance of payments. Most observers agree that the depreciation went beyond what was needed to remove the overvaluation.

At this point it may be well to consider for a moment the meaning of the terms over- and undervaluation. The standard to which they relate is the equilibrium rate of exchange, that is the rate which, over a certain period, maintains the balance of payments in equilibrium without any net change in the international currency reserve.¹ At-

¹ The balance of payments for the purpose of this definition must include not only all transactions on current account (trade and services) but also any normal capital

tempts to define the equilibrium rate in terms of a "purchasing power parity" have not been successful. To compare the prices of individual goods and services in two countries, converted over the exchange rate, is of little or no use (because of differences in quality, location, efficiency, etc.); and there is no means of comparing the general "level" of prices in two countries. Price indices are designed merely to indicate *changes* in the "price level" over a period of time, and a change in one country can be compared with a change in another, allowance being made for any change in the exchange rate. As already observed wholesale price indices may be misleading in this connection since they are often heavily weighted with staple commodities whose prices fluctuate in a closely similar way in different markets. International price comparisons seeking to ascertain the "purchasing power parity" have therefore sometimes been based on indices of wage rates, retail prices or the cost of living. The practical value of such comparisons, however, must always be limited in view of the fact that the balance of payments is affected not only by the movement of prices at home and abroad, but also by changes in demand, tariffs, interest rates and many other factors. It is under conditions of inflation that price comparisons are likely to be most useful, and this may partly explain the vogue of the purchasing-power-parity theory in the early 'twenties. In general, while changes in price indices may furnish a helpful indication, they are only one of the various indications that must be taken into consideration when it is desired to establish that rate of exchange which will keep the balance of payments in equilibrium.

If, however, balance-of-payments equilibrium were the sole criterion of the equilibrium rate of exchange, there might be little justification for regarding the pound sterling in the years 1925-30 as overvalued. For there was little sign of disequilibrium in the British balance of payments. The Bank of England's gold reserve remained, on balance, practically constant during those six years; it was not until July 1931 that it decreased sharply owing to withdrawals of foreign funds. A continuous influx of "equilibrating" short-term balances during those years would have been a symptom of overvaluation equivalent to a loss of gold; but there is little evidence of such an influx. During the months immediately preceding the restoration of the gold parity in April 1925, large amounts of liquid foreign funds are believed to have moved to London in order to profit by the appreciation of the pound. Once the gold parity was restored, these funds presumably moved out again. They were probably replaced by

movements relating to international investment. It is desirable in most cases to exclude short-term capital movements—the abnormal disequilibrating movements of the "hot money" type as well as those equilibrating movements of liquid funds which in their role as a short-term balancing item serve merely as a substitute for transfers of international currency reserves.

French balances during the flight from the franc in 1925 and 1926. From the end of 1927 to March 1931, according to the "Macmillan Report," the net amount of foreign short-term claims on London did not increase; on the contrary, it was slightly reduced.¹

A country may have a rate of exchange such that its balance of payments can be kept in equilibrium only by a contraction of total domestic income and demand; and if wages and prices are rigid, such a contraction must operate through unemployment. This seems to have been the situation in the United Kingdom during the period 1925-30 (though of course there were various other factors at work, such as an adverse shift in demand for certain articles of export and probably a relative lag in technical advance). The external accounts were kept approximately in balance, but only at the cost of large-scale unemployment and depressed business conditions in comparison with the outside world. Thus balance-of-payments equilibrium alone is not a sufficient criterion; at different levels of income and employment, equilibrium in the balance of payments can be secured at different rates of exchange. It may be better therefore to define the true equilibrium rate as one that maintains the balance in equilibrium without the need for mass unemployment at home, or at any rate without a degree of unemployment greater than in the outside world.²

In any event it is clear that comparison of price movements in different countries is not sufficient for determining the equilibrium rates of exchange. The purchasing-power-parity approach, which uses price movements as the main criterion, tends to neglect the important conditions affecting the volume of demand; it treats demand simply as a function of price, leaving out of account the wide shifts in aggregate income and expenditure which occur in the business cycle (as a result of market forces or government policies) and which lead to wide fluctuations in the volume and hence the value of foreign trade, even if prices or price relationships remain the same. Especially in times of depression and in the early stages of recovery, the supply of goods and factors of production tends to be highly elastic, so that great changes in effective demand may take place with little or no

¹ Committee on Finance and Industry, *Report* (London, 1931), page 112. The Committee was careful to point out, however, that its figures were not quite complete.

² In addition to the "primary" criterion—namely, balance-of-payments equilibrium—it may thus be necessary to use one or the other of two "subsidiary" criteria: (a) good employment at home, whatever the state of employment may be abroad; or merely (b) "synchronization" of employment conditions at home as compared with abroad. The former might lead to an apparent paradox in a time of world-wide depression, when all currencies might have to be described as "overvalued." But it is clear that if all countries were depressed, with balances of payments in equilibrium, any one country could expand to the point of full employment and, by appropriately lowering its exchange, still keep its balance of payments in equilibrium. If all countries expanded simultaneously, equilibrium rates on this definition might be reached without any change in actual rates. Thus even in this case there is no serious difficulty of definition, except that the subsidiary criterion might seem to assume undue importance compared with the primary one.

effect on prices. For example, the striking revival of demand which occurred in the United States in the second half of 1938, reflected in an expansion of industrial activity by 35% and a rise in the value of imports by 16%, was accompanied by a falling tendency in the general level of prices.¹

The effects of the depreciation of sterling in 1931 should be considered in relation to the development of monetary demand in the United Kingdom. It has been said that, from the world point of view, the devaluation of a currency is expansionary in effect if it corrects a previous overvaluation but deflationary if it makes the currency undervalued.² The depreciation of sterling did both and may therefore have been "neutral," unless the new undervaluation was greater than the previous overvaluation. But this question need not detain us. The important fact is that the devaluation of the pound, though it was forced upon the British authorities by the sudden withdrawal of foreign balances, offered an opportunity for initiating almost immediately a large and deliberate monetary expansion at home. Early in 1932 the bank rate was reduced from 6 to 2% and the Bank of England made large security purchases in the open market, thereby expanding the cash base and inducing, in turn, an expansion of commercial bank credit. For domestic credit policy, an important consequence of the suspension of gold payments was that expansionist open-market operations could be carried out effectively, without any fear of their being neutralized by losses of gold.

Undoubtedly the pound became undervalued at first. But, if account is taken not only of price movements but also of the expansion of demand and business activity in the United Kingdom, the undervaluation appears to have been short-lived. The ratio of exports³ to industrial production rose slightly in 1932. But in 1933 and the following years exports lagged persistently behind the rise in domestic industrial activity. It is an accepted fact that the recovery in the United Kingdom was mainly in the home market, and was stimulated mainly by cheap and abundant money coupled with a considerable "backlog" of investment opportunities, especially in residential building, as well as by cheap food imports which released domestic purchasing power for other purposes, including housing.

To a large extent, of course, it was the subsequent devaluation of other currencies that reduced or removed the undervaluation of sterling.

Unlike sterling, the U.S. dollar was devalued not under the pressure of external forces but in a deliberate attempt to relieve the desperate financial and economical conditions in which the new administration assumed office in March 1933. The causes or motives may have been

¹ Cf. *Monetary Review*, Money and Banking 1938/39, Vol. I, p. 20.

² Cf. Haberler, *Prosperity and Depression* (3rd ed.), p. 439.

³ Quantum index.

very different in the two cases; but the use made of devaluation with a view to promoting recovery in national income and employment was similar. Efforts made previously—especially in the second quarter of 1932 and again in March 1933—to expand the credit base by open-market operations had been neutralized by losses of gold. Though the gold stock was very large, such losses were viewed with concern. The embargo placed on gold exports on April 20th, 1933 was therefore a welcome means to render internal credit expansion effective.¹ The large open-market purchases which were in fact carried out in the next six months improved the liquidity of the banks and reduced money rates. This provided, at least, an indispensable condition of recovery. An immediate recovery actually occurred in employment, production and national income; and a special factor retarding exports and increasing the demand for imports was the course of the exchange depreciation in 1933, which, as already observed, gave rise to anticipations of a speculative character.

Just as the suspension of the gold standard in the United Kingdom was accompanied or followed by the depreciation of many other currencies, most of which were sooner or later pegged to sterling, so the dollar devaluation also led to exchange depreciation in a large group of countries, including such countries as the Argentine, Brazil, Canada, Colombia, Ecuador and Mexico, where some degree of depreciation had already occurred earlier.

Two small countries devalued independently—Czechoslovakia in February 1934 and Belgium in March 1935. A comparison of the two is instructive; but it has been made elsewhere² and need not be repeated here. Briefly, Czechoslovakia seems to have chosen her rate of devaluation (16%) simply with a view to removing the existing disparity between domestic and foreign costs and prices. She had to devalue again in October 1936. Belgium, on the other hand, chose a rate (28%) designed to leave a margin for an expansion of domestic demand and industrial activity. This expansion materialized, and in consequence demand for foreign raw materials increased to such an extent that the first twelve months after the devaluation witnessed a sharp rise in the import surplus.

The continued deflation in the remaining gold bloc was felt as a drag on world recovery. It is significant that some of the leading countries that had devalued earlier, far from wishing to preserve any competitive advantages, were strongly in favour of an alignment of the gold bloc. When that alignment was effected in September 1936, the leading member of the bloc—France—had already embarked on a policy of deficit finance and wage and price increases, and the social strains accumulated during the long years of deflation led to disturb-

¹ Cf. J. H. Rogers, in *The Lessons of Monetary Experience* (ed. by A. D. Gayer, 1937), pp. 104-105.

² *Monetary Review*, Money and Banking 1935/36, Vol. I, pp. 49 ff.

ances which in 1937 and early in 1938 carried the franc far below the level to which it was first devalued.

At the end of 1936, however, in contrast to 1934 or 1932, exchange relationships between the principal free currencies were not widely different from what they had been in 1930, before the cycle of devaluations had begun.¹ What then, was the significance of this whole cycle? Was any good purpose served by the successive shocks to international currency relations, was there any need for going through such violent disturbances if the outcome in terms of exchange rates differed so little from the starting-point?

In contemporary discussion much stress was laid on the competitive aspects of currency devaluation. In many quarters devaluation was regarded primarily as a means of improving a country's foreign trade balance and hence its volume of domestic employment—an effective means but one that operated necessarily at the expense of other countries and invited retaliation.

More recently, empirical studies have suggested a shift in emphasis. It has been shown that countries with depreciated currencies increased their exports mainly to other countries with depreciated currencies. This was a natural result of the expansion of production and money income which accompanied or followed devaluation. In other words, monetary expansion tended to stimulate not only home market activity but also the foreign trade of the countries with depreciated currencies *inter se*. When devaluation by any one country had no other effect than improving the trade balance, that improvement was necessarily matched by a deterioration elsewhere. But when, as was more frequently the case, devaluation was followed by a domestic expansion of investment and national income, that expansion was a net expansion from the world point of view, tending to stimulate foreign trade all around. The revival of aggregate demand in certain important markets, rather than any "exchange dumping," appears to have been one of the central factors governing the movement of trade during the devaluation period. The evidence seems to suggest that any export

¹ The exchange value of certain currencies in relation to the U.S. dollar is shown in the following table (Dec. 1930 = 100):

	December :	1930	1932	1934	1936
Argentina		100	76	99	98
Brazil		100	80	86	91
Australia		100	59	88	87
Sweden		100	67	95	94
India		100	68	102	101
United Kingdom		100	67	102	101
Canada		100	87	101	100
United States		100	100	100	100
Czechoslovakia		100	100	141	119
Italy		100	100	162	100
Belgium		100	100	168	121
France		100	100	168	119

gains obtained by devaluation at the expense of countries that had not yet devalued were short-lived and relatively unimportant.¹

The devaluation cycle of the 'thirties cannot be viewed in proper perspective apart from the general cycle of prosperity and depression. Devaluation was felt to be necessary, and was used, chiefly as a means to obtain freedom of national action in combatting depression, in maintaining or reviving aggregate demand and employment at home. No country achieved recovery without some measure of monetary expansion.² What made the long succession of devaluation inevitable was the fact that monetary expansion was completely uncoordinated in time as well as degree. If the leading industrial nations had initiated, by whatever methods appropriate to local conditions, a simultaneous policy of monetary expansion in, say, the spring of 1931, they would probably have had little difficulty in keeping their mutual exchange rates stable. Actually there was at that time complete lack of agreement, within as well as between countries, as to what should be done to combat the depression, and even if people had agreed on the solution which was ultimately in fact adopted, they would still have had to realize the need for international coordination with respect at least to timing. The bewildering diversity of views expressed by various delegations at the London Monetary Conference in 1933 was a striking demonstration of this lack of common ground.

In default of simultaneous anti-depression measures, successive devaluations leading to monetary expansion were the only practical alternative, if exchange control was to be avoided. In certain countries exchange control was not avoided, and was used, in place of devaluation, as a cover behind which expansion could be set on foot at home. The methods and objectives of exchange control are dealt with in Chapter VII. But even under a system of unrestricted exchanges, one may ask, could not an individual country adopt expansionist policies without resort to devaluation? Could it not use what "international margin" it may have in the form of gold and foreign exchange? In practice, anticipatory capital movements of the kind discussed are liable to defeat such action. If a national policy of monetary expansion raised doubts regarding the maintenance of the exchange parity, any attempt at expansion would tend to be neutralized by gold exports and the "international margin" would be dissipated without benefit to national income and employment. France suffered from difficulties of this kind in 1937. The first country in the devaluation cycle—the United Kingdom³—had too slender a margin

¹ See especially Seymour E. Harris, *Exchange Depreciation* (1936) and Milton Gilbert, *Currency Depreciation 1929-1935* (1939).

² Cf. *Monetary Review*, Money and Banking 1935/36, Vol. I.

³ The devaluations which occurred in a number of agricultural countries before September 1931 may be considered a "normal" mechanism of adjustment in such countries (see Section 6, below). The "devaluation cycle" discussed in the present section started with the pound sterling and ended with the French franc.

to embark on an independent policy of internal expansion without allowing the exchange to fall. When it came to be the turn of the United States, the pound had already been devalued. Speculative capital, therefore, was even more sensitive than before; and so long as there was any gold left in the Federal Reserve Banks which could be bought with dollars and exported, credit expansion could not be made fully effective. It could have become fully effective only after the complete exhaustion of the gold stock. Instead of waiting till then, a gold export embargo could be, and was, imposed at once.

"When . . . national policies cease to regard the maintenance of exchange stability as something which must take precedence over all other considerations, . . . speculation regarding the probable movement of the exchanges, and capital movements in connection with such speculation, are normal and inevitable."¹ The experience of the 'thirties suggests that in a world where the mitigation of depression and unemployment has come to be regarded as something that must take precedence over other considerations, frequent changes in exchange rates and the disturbances associated with them can only be avoided if national anti-depression measures are coordinated.

The "Tripartite Agreement" came into being when the cycle of devaluations was completed. Though it did not provide for coordination of domestic policies, monetary expansion was in fact under way in all the three principal countries concerned. The immediate object was to prevent a re-opening of the devaluation cycle. In spite of its famous "24-hour" clause, the agreement did seem to imply a recognition of the value of exchange stability, or a recognition at least of the fact that exchange variations are not solely a matter for national sovereign action. France, as mentioned before, was subject to internal disturbances which caused the franc to depreciate further until it was virtually pegged to sterling in May 1938. Thus, apart from its gold settlement mechanism, the main object of the agreement was in fact to regulate the dollar-sterling rate in the common interest of the two leaders and of the currency areas grouped around them. The dollar-sterling rate fluctuated within a moderate range, and it is perhaps significant that after a 5% depreciation of the pound during 1938, the more flexible methods of regulation were abandoned in favour of a rigid stabilization of the rate at 4.68 dollars to the pound from January to August 1939.

5. DEVALUATION AND THE PRICE OF GOLD

We have seen that the exchange relationships reached at the close of the devaluation cycle were not widely different from those that prevailed at the outset. But one thing was very different, and that was the price of gold in terms of the devalued currencies (*i.e.*, all curren-

¹ G. Haberler, *Prosperity and Depression* (3rd ed., League of Nations 1941), p. 431.

cies except those that were kept at nominal parity by means of exchange control). By 1937, the price of gold in these currencies had increased by 70% on the average. During the devaluation period there was always at least one leading country maintaining a fixed price for gold, and in other countries the price was determined indirectly by way of the exchange rates. In every case, therefore, devaluation could be expressed as a reduction in the gold value of the currency or a rise in the currency value of gold.

As was observed in Chapter I (Section 3), the general rise in the price of gold resulted in an increased gold output in physical terms, as well as an increased monetary value of both the current output and the pre-existing stocks of gold.

In the last section we dealt mainly with the time-sequence of devaluations in relation to national efforts to promote recovery from depression. If instead of the "successive" we consider in this section merely the "all-round" character of devaluation in the 'thirties, it is the increase in the supply of gold available for international currency reserves that stands out as the main outcome. This increase was discussed in Chapter I, and there is no need to consider it again in any detail. The point is that in an international currency system linked directly or indirectly to gold, all-round devaluation may be one method of increasing the volume of international currency reserves in the system as a whole, a method which, incidentally, is conceivable without any new production of gold.

To some extent it was no doubt the breakdown of the gold exchange standard which necessitated resort to this method. The decline in the volume of central-bank foreign exchange reserves began in 1928, though it did not become precipitate until the depreciation of the pound, that is, until after the start of the devaluation cycle. During the two years 1931 and 1932, the total foreign exchange reserves of 24 European countries declined by \$1,800 million while the total recorded monetary gold reserves of the world rose by less than \$1,000 million. Moreover, the diminished supply of international currency reserves (gold *plus* foreign exchange) was faced with an increased need for them, due at first in particular to the panic withdrawals of foreign short-term credits in the "international liquidity crisis" which broke out in the spring of 1931 and which reduced, for instance, the German Reichsbank's gold reserve—at that time the fourth-largest in the world—by 40% in a single month. Later, the increased need was due to the "hot money" transfers that preceded, accompanied and followed the various currency devaluations. These transfers were effected largely in gold, and so their disturbing effects on trade and productive activity were attenuated.

The successive devaluations created a need for gold as a means of "hot money" transfers; and this need tended to be met by the increase in the value and output of gold resulting from devaluation. But there

was no automatic force to secure a proper correspondence between the need and the increased supply. The fact that the average price of gold rose by 70%—rather than, say, 30% or 50%—was due to fortuitous circumstances, or at any rate to factors not directly related to the question of the world's gold supply. The extent of the initial depreciation of both the pound and the dollar, which was the main determinant of the 70% rise in the average price of gold, was largely due, as we have seen, to speculative short-term capital movements. If devaluation had been not only general but also simultaneous, the effect on international liquidity would probably have been much stronger because less gold would have been needed for speculative capital transfers.

The method of all-round alterations in the gold value of national currencies was applied only in the downward direction during the 'thirties. Devaluation gave rise to "inventory profits" on existing gold stocks, profits that could be either used for purposes of credit expansion or sterilized. Increases in the gold value of currencies have been very rare, and one of the reasons for this may be the revaluation "losses" which they involve on the existing gold holding of central banks. Needless to say, these accounting losses could easily be offset by some accounting device, such as the creation of a government debt to the bank, a debt which would be wiped out again in the event of a subsequent upward revaluation.¹

In the middle 'thirties, as economic recovery got under way, opinion in many quarters became concerned over the plethora of gold which was developing as a result of the higher price. It was feared that the rapid rise in the world's gold supplies might lead to inflationary tendencies. In the latter part of 1936 and at the beginning of 1937 the possibility of reducing the price of gold came to be widely discussed. In the spring of 1937 the belief gained ground that the United States Treasury was planning such a reduction, either alone or in concert with the United Kingdom and possibly other countries. The plan, if it ever existed, was not carried out. A recession in security and commodity prices began in the United States in March and early April. But discussions of a possible cut in the price of gold continued, producing a violent dishoarding movement, the "gold scare," which lasted throughout the second quarter of 1937.

¹ If an upward revaluation is made in the first instance, provision could be made for a later downward change. The revaluation profit could be credited to a government fund in the form of a deposit at the central bank. The deposit may remain unused, or government securities may be bought with it. Later, when the price of gold is reduced, the deposit, if unused, could be cancelled, thus offsetting the revaluation loss; or the securities bought could be handed over to the central bank to replace the loss.

6. EXCHANGES OF PRIMARY PRODUCING COUNTRIES

The pre-1914 gold standard was by no means universal. In raw-material exporting countries exchange fluctuations were very frequent. Indeed, currency depreciation has in the past been the usual reaction of these countries to any serious fall in their export prices. It is through a fall in export prices and hence in farmers' incomes that depressions in the industrial centres have usually affected them. In such circumstances exchange depreciation tends to arrest the internal deflation resulting from the contraction in export values and to keep up the national income in terms of domestic currency, even if, as is generally the case, demand for the agricultural export products is inelastic. True, the service of the foreign debt is rendered more costly in terms of domestic currency; but severe deflation, which is the alternative, makes the collection of the debt service much more difficult.

Between 1919 and 1939, wide and sometimes violent fluctuations took place in prices of primary products, and the currencies of the exporting countries frequently reflected them. As was mentioned earlier, the great price slump of 1920/21, while it improved the exchange position of European consuming countries, led to a fall in the exchanges of several raw-material producing states outside Europe, notably in South America. The subsequent recovery in prices from 1922 to 1925 was accompanied by a recovery in the currencies of some of these countries, including, for example, the Argentine, Bolivia, Colombia and Peru. In 1929/30, agricultural countries such as Australia, New Zealand, the Argentine, Uruguay and Brazil were the first to depreciate; others followed suit after the depreciation of the pound. In some cases exchange fluctuations in the early 'thirties followed quite closely the price movement of certain export products on the world market. Thus there was a clear correlation between the exchange value of the Venezuelan currency and the dollar price of crude petroleum, while the currencies of Brazil, Colombia and Salvador tended to move with the dollar price of coffee.¹ Bolivia adopted an official scale in 1932 linking the exchange rate directly to the price of tin in London.² When prices of primary products recovered, especially during 1935-37, many of the Latin-American currencies—those of the Argentine, Brazil, Venezuela, Salvador, Costa-Rica, etc.—recovered a part, but generally only a small part, of the decline they had suffered in the great depression.

When the next price fall came, in 1937/38, exchange adjustments in agricultural countries were relatively few and small. In the sterling area, India and New Zealand made slight changes in their rates on the pound. But the downward movement of the pound sterling and the

¹ League of Nations, *Monetary Review 1937* (Money and Banking 1936/37, Vol. I), pp. 13-14.

² *Commercial Banks, 1929-33* (League of Nations), p. lxviii.

sterling area as a whole relatively to the dollar during 1938 was probably due in some measure to the fall in raw material prices, which contributed to the outflow of gold from London since many members of the sterling group had to draw upon their London funds for payments outside the area, especially to the United States. In South America, the exchange controls imposed earlier in the 'thirties were maintained, and the exchange adjustments effected in the Argentine, Brazil and Uruguay under the impact of the recession were accompanied by a tightening of the control regulations. Peru, the only South American country that remained free from exchange control, allowed her currency to recover slightly up to the spring of 1937 and to drop by 20% thereafter. The Peruvian central bank smoothed out the movement in both directions by acquiring large amounts of gold and foreign exchange during the recovery and by releasing them in 1937/38 in order to soften the slump.

So long as prices of primary products are subject to wide cyclical fluctuations, it may be as well to recognize the peculiar difficulties of countries dependent on the export of such commodities and to accept exchange fluctuations as a normal feature of their monetary policy. This was the position taken up explicitly by the Central Bank of Chile in 1938: "As the Latin-American countries are primarily producers of raw-materials and foodstuffs, the wide fluctuations in the prices of these products, which are extremely sensitive, may affect their economic life to such an extent as to make it impossible for them to maintain the principle of a rigidly stable currency. . . . Nevertheless, so long as internal and external conditions permit, a central bank should follow a policy of maintaining *de facto* stability of the currency in relation to gold or to currencies with an international circulation. The bank should, however, have power to modify this relation whenever considerations affecting the internal prosperity of the country render this action advisable, without its being regarded in every case as a breakdown of the monetary system."¹

In practice, a deliberate policy of cyclical exchange variations is apt to work in a one-sided fashion. Exchange depreciation in the slump should be followed by exchange appreciation in the boom. Though we have noted several instances of appreciation in times of economic recovery, this was seldom sufficient to make up for more than a small part of the preceding depreciation. In considering the period since 1926, we should however bear in mind (a) the long-term shift in the terms of trade to the disadvantage of agricultural states, and (b) the devaluation cycle among the industrial states, which led to an all-round lowering in the gold value of currencies. Yet there remains what seems to be a general reluctance to allow currencies to appreciate in times of good trade. This may be due partly to an inflationary bias

¹ Memorandum furnished by the Central Bank of Chile in reply to a circular inquiry of the Delegation on Economic Depressions (League of Nations).

in domestic credit policy and partly, perhaps, to the central banks' aversion to, or neglect to make provision for, the revaluation "losses" that would arise if gold and foreign exchange reserves were revalued at current market rates.

There are, however, certain factors at work which may make exchange fluctuation less necessary in future. In the first place, internal monetary organization in agricultural countries has been improved and strengthened. We need merely recall the number of central banks created in the middle 'thirties in such countries as the Argentine, Venezuela, Canada, India and New Zealand. The development of central monetary authorities and effective instruments of currency and credit control makes it possible for primary producing states to pursue a policy by which in good times the central bank absorbs the surplus of the balance of payments and reduces its domestic assets while in bad times it helps to meet the deficit by selling foreign exchange and expands its domestic assets to prevent excessive deflation. A policy such as this has obviously a steadying effect on the external value of the currency. Peru seems to have followed this line during the years 1935-38, except that the offsetting movement of domestic central-bank assets was confined to the downward phase (1937/38). The most striking and successful example of such a policy was given during the same period by the newly founded central bank of the Argentine.¹

The growing industrialization of primary producing countries may well be another and more fundamental change tending to reduce the need for exchange fluctuations. Industrialization has been one way in which these countries have reacted to the instability of their balance of payments. The economic structure of the typical agricultural country is becoming more diversified. Its balance of payments is less dependent on the fate of a single crop and less dependent on the wide cyclical swing of prices of staple products on the world market. These tendencies may help to promote stability of exchange rates in the countries in question.

7. GENERAL CONDITIONS OF EXCHANGE ADJUSTMENT

We began this chapter by considering the depreciation of European currencies in the early 'twenties; the shortage of physical working capital which was partly responsible for it; and the inflow of speculative foreign funds which, for a time, were attracted by anticipations of subsequent recovery of the depreciating currencies. This particular relationship between exchange fluctuations and capital movements was based on a foundation of beliefs and expectations which probably cannot be restored unless the inter-war exchange disturbances are wiped out from men's memories. It is therefore all the more

¹ For details, see Chapter IV, p. 85 above.

important that other means should be prepared for directing resources to countries denuded of their working capital at the end of the second world war.

The way in which exchanges were eventually stabilized during the years 1922-1928 led us to stress the importance of establishing an initial system of exchange rates by coordinated and, as far as possible simultaneous international action. To determine the equilibrium levels of exchange rates by mutual agreement at the end of a world war is, of course, a very difficult undertaking. Account must be taken of changes in the wage and price structure and in the productive efficiency of the different countries. The abnormal and temporary import surpluses which certain countries must need in order to reconstitute their working capital should not be regarded as symptoms of overvaluation and should be covered by other means than international currency reserves. To fix the currencies of such countries at unduly low levels would probably stimulate price inflation and would do little to help their exports until their productive capacity is restored.

There may be certain factors, however, which might possibly render the determination of initial post-war exchange rates less difficult than it appears. First, there are no longer any traditional pre-war currency parities to which countries would want to return at all costs. Secondly, in the conditions of full employment which it is to be hoped may prevail in the immediate post-war period, price and wage changes may be a more reliable indication of the equilibrium level of exchange rates than in conditions of depression and unemployment. Thirdly, it is between the few leading industrial and trading nations that agreed exchange rates at or near the equilibrium level are of prime importance for the working of the international currency system as a whole. Further, if in any countries government controls have broken down, wages and prices are in a state of flux and dependence on foreign help is great, the simplest procedure might be to fix the exchange at any given level and to adjust internal factors to it. At all events, it seems likely that, in spite of the difficulties, any system of exchange rates reached by international consultation will be better than one in which exchanges are determined either by isolated acts of national sovereignty or by markets subject to speculative transfers of funds. To let the exchanges "find their own level" would almost certainly result in chaos.

Once an initial system of exchange rates is established, the question arises in what conditions departures from that system are to be permitted.

If there is anything that inter-war experience has clearly demonstrated, it is that paper currency exchanges cannot be left free to fluctuate from day to day under the influence of market supply and demand. There has been what may almost be termed a secular change by which the public has become (a) more liquid and (b) more sensitive or

"elastic" in regard to expectations.¹ If currencies are left free to fluctuate, "speculation" in the widest sense is likely to play havoc with exchange rates—speculation not only in foreign exchanges but also, as a result, in commodities entering into international trade. In these circumstances the dichotomy between external and internal stability, which has sometimes been stressed by advocates of fluctuating exchanges, tends to become quite unrealistic. Except possibly in a country whose international transactions are comparatively insignificant in its total activity, it is difficult to conceive of any method of achieving internal stability with both capital and commodity markets subject to "external" fluctuations of the kind we have discussed. A forward market in foreign exchanges is undoubtedly a great convenience to business men negotiating foreign sales or purchases under freely fluctuating exchanges; but it obviously cannot prevent the disequilibrating movements of capital and trade that are liable to arise in such a system. To the extent that exchange fluctuations call forth equilibrating reactions in foreign trade tending to balance the international accounts, they do so by causing continual shifts of productive resources between home-market and export industries, shifts which are apt to produce frictional unemployment and which clearly are wasteful if they are only required for a short time in response to purely temporary changes in exchange rates.² Moreover, exchange fluctuations create a risk element which, even if covered, at a price, by forward operations, inevitably tends to discourage international trade.

There only remain to be considered, therefore, such departures from the initial system of exchange rates as are brought about by deliberate action of the monetary authorities. The disadvantages of freely fluctuating exchanges, which have just been indicated, are liable to arise to some extent also when deliberate exchange adjustments are undertaken too frequently. Changes in exchange rates may be justifiable in the case of chronic and long-term disequilibria in balances of payments; they are not, as a rule, suitable for dealing with short-term disequilibria, which should rather be met by transfers of international currency reserves.

We may distinguish between (a) structural and (b) cyclical factors which may require departures from the initial system of exchange rates. It is particularly the former that are likely to cause chronic disequilibria of the kind that may call for readjustment of exchange rates; yet there is little that can be said about them in general terms, in view of the great variety and unpredictable nature of the possible

¹ Whether the two factors are independent need not here be discussed. It may well be that (a) is merely a manifestation of (b).

² Under stable exchanges, these costly temporary shifts can be avoided by the settlement of temporary discrepancies in the balance of payments through transfers of international currency reserves.

influences: *e.g.*, population movements, natural disasters, commercial policies, transport conditions, technological developments, secular shifts in the terms of trade between agricultural and industrial products. In two competing industrial countries the rate of technical progress, for example, may be widely different, and this may cause a strain in the balance of payments. To what extent, if at all, was the depreciation of the pound sterling due to a slower rate of technical advance in the United Kingdom compared with the United States? The question in this concrete instance admits of no definite answer since cyclical factors combined with an initial overvaluation would seem to provide a sufficient explanation. But the case may conceivably present itself in a clear-cut manner. Should the relatively backward country be allowed to devalue its currency? Technical advance, it is true, may lower the price-level in A, improve A's trade balance and impose deflation on B if the exchange rate is not changed. This influence may, however, be partly or wholly offset if, as is likely, technical advance encourages investment activity in A, in which case the resulting expansion in employment and national income may stimulate imports to the same extent as the reduction in costs may stimulate exports.

Among "cyclical" factors that may call for alterations in exchange rates, there are the price fluctuations that affect the balances of payments of primary producing states. We have seen that exchange fluctuations in these states followed a fairly regular pattern in the period under review, and that there may be a strong case for recognizing such fluctuations as a normal method of adjustment so long as prices of primary products remain subject to wide cyclical swings. But the need for this method may diminish with the changes that are taking place in the economic structure of these countries. Moreover, the cyclical fluctuations in their balance of payments may be—and recently have been to an increasing extent—smoothed out by a central banking policy of accumulating foreign currency reserves in surplus years and releasing them in times of deficit, with inverse changes in domestic credit. This may be regarded as simply an extension of a policy that has usually been applied as a matter of course to seasonal fluctuations, which in the international balance of agricultural countries are often very wide. In some industrial countries the seasonal nature of agricultural imports has caused similar fluctuations; the autumn drain of gold was a familiar phenomenon in Great Britain in the days of the gold standard. The analogy between seasonal and cyclical variations cannot, of course, be pushed very far, as the latter are often much less regular. Nevertheless, the monetary authorities in agricultural countries might with advantage take a long enough view of their external accounts so as to aim at balancing them over periods of, say, eight or ten years. In fact, a "cyclical equalization

policy," reducing or eliminating the need for exchange variations, seems to have recommended itself to several of them.

Between the more highly industrialized countries there would be no need for cyclical exchange adjustments if cyclical changes in business activity were synchronized. The pre-1914 gold standard enforced exchange stability through a high degree of synchronization. The members of the system were kept in step with each other; but there was no conscious effort to prevent the whole system from undergoing booms and depressions. Governments have since become conscious of a responsibility for mitigating depression and unemployment. In these circumstances, as we have repeatedly noted before, synchronization as a condition of exchange stability has come to mean coordination of anti-depression policies. The exchange disturbances of the inter-war period must in part be traced to the fact that such coordination had not yet been developed.

But even if the need for coordination were recognized, it is unlikely that all countries would be equally successful in combatting depressions; differences in cyclical conditions might still arise from time to time. With existing objectives of economic and social policy, it may be impossible to expect one country (A) to tolerate a depression because a depression has developed in another (B) however great the industrial and financial importance of that other country may be. Is exchange depreciation on the part of A the appropriate method of adjustment in these circumstances?

It is certainly not the only method. If agricultural countries can avoid exchange fluctuations by means of a cyclical equalization policy, there is no reason why industrial nations should not do so. The policy may take two forms. If A has a sufficient international currency reserve to start with, it would relinquish some of it temporarily, so long as there is depression in B. If A's reserve is inadequate, B would have to grant a temporary credit either directly or by way of some international equalization fund, which incidentally would be in the interest of B's own employment situation as it would help to keep up its exports. The consequences of imperfect coordination in business cycle policy could thus at least be mitigated by financial cooperation.

The mechanism of "equalization," which should take the place of exchange adjustments in meeting cyclical differences, might easily be strained to breaking point if in addition it had to absorb the outflow of funds from A which is bound to develop if there is a possibility of exchange depreciation by A in the circumstances indicated. These disequilibrating capital movements are one of the most troublesome features in a system of "flexible" as well as in one of freely fluctuating exchange rates. As will be shown in a later chapter, they share a large part of the responsibility for the growth of exchange restric-

tions in the 'thirties.¹ Even if changes in exchange rates were in future ruled out as a normal method of international adjustment, the mere memory of the inter-war period—the period of uncoordinated business-cycle policies and flexible exchange rates—may keep the disequilibrating tendencies alive, and may consequently necessitate restrictions on the international flow of funds.

The more frequent the exchange adjustments, the stronger are likely to be the disequilibrating tendencies not only in the capital flow but also in the movement of trade; the more frequent and disturbing will be the internal shifts of labour and other resources; the more seriously will exchange risks hamper foreign trade. Changes in exchange rates should therefore be made only in cases of persistent disequilibria in order to avoid alternative measures of adjustment, such as deflation or import restrictions, which are even costlier in terms of general economic stability and well-being. To this it may be added that, just as in the establishment of the initial system the determination of workable ratios between the two or three leading currencies should receive special attention, so any subsequent adjustments between these leading currencies should be made with particular reserve and particular care. Adjustments in "peripheral" currencies can be made with less disturbance to the system as a whole.

As a general rule, such exchange adjustments as may prove necessary after the establishment of an initial system should be made by mutual consultation and agreement. It ought to be an elementary principle of international monetary relations that exchange rates should not be altered by arbitrary unilateral action. The Tripartite Agreement was a belated and half-hearted admission of this principle.

But the difficulty of fixing appropriate exchange rates in the first instance is so great that there should be a reasonable willingness to adjust them in the light of experience and a reasonable latitude should be afforded to governments under any international system to make some adjustment unilaterally. Refusal to allow necessary adaptations may result in the country which finds its balance of payments out of gear imposing unilaterally restrictions on imports or subsidizing exports. To afford an incentive to such unilateral action regarding international trade by refusing any latitude as regards monetary relations is to the advantage of no one.

The desires of different countries in regard to exchange rates may be difficult to reconcile. Thus, in the past, countries have usually shown a great reluctance to see their currencies appreciate, a reluctance that is understandable in conditions of under-employment and one that is likely to weaken when there is full employment at home. Conversely, exchange depreciation has sometimes been sought only

¹ We are here concerned with monetary factors alone. Needless to say, the "hot money" problem of the 'thirties was not only monetary but partly also political in origin.

too eagerly by individual countries as a means of improving the state of employment in default of adequate domestic demand. Yet it should not be forgotten that on occasion the depreciation of certain currencies has been desired by the rest of the world. The most notable recent cases were the gold bloc and the currencies of Central and Eastern Europe in, say, 1935, when the rest of the world would have gladly accepted a certain degree of devaluation in preference to the alternative policies pursued in the two groups of countries, namely, deflation and import quotas in the one and drastic exchange controls in the other. It was, of course, mainly the sterling and dollar devaluations that rendered the other currencies overvalued, and those devaluations need probably not have occurred had there been a concerted policy to combat the post-1929 depression. This case nevertheless illustrates the possibility that countries whose currencies have for whatever reason become grossly overvalued may have to be urged or persuaded to devalue their currencies in the general interest. The initiative in international consultation regarding possible exchange adjustments should therefore not be confined to individual countries desiring a change in their own currency values.

CHAPTER VI

EXCHANGE STABILIZATION FUNDS

AN Exchange Stabilization Fund is a collection of assets segregated under a central control for the purpose of intervention in the exchange market to prevent undesirable fluctuations in exchange rates. It may or may not be the exclusive agency for official intervention, and it must operate within the framework of some general system of international settlements.

During the seven years preceding the outbreak of war in 1939 the most active Exchange Funds were developed as instruments for administering an international gold settlement system which was the successor in a large part of the world of the international gold standard system. This development in turn was the product of a compromise between the principle of national sovereignty over monetary policy and the principle of adaptation to the requirements of membership in a world monetary system. This compromise was begun by the use of open market operations as the major instrument of credit control and the disregard by central banks of international gold movements as guides to credit policy. It was carried further by the device of exchange stabilization funds.

I. INTERVENTION IN THE EXCHANGE MARKET

The purposes for which Exchange Stabilization Funds have intervened in the foreign exchange markets during their short history have not been the same for all funds, or for a single fund at all stages of its development. Their general aim is incorporated in their title—they are called stabilization funds. But experience has shown that exchange stability as an objective of practical policy has had no precise and generally accepted meaning, and that the managers of such Funds can all profess the same general aim and still look upon each other's policies with suspicion.

An early and often repeated formulation of the aims of the British Exchange Equalization Account was that the Account was designed, without resisting general trends, to iron out undue fluctuations in the exchanges caused by erratic movements of capital and the disturbing activities of speculators. This objective was extended to include combatting seasonal exchange fluctuations. In practice, however, it proved impossible to confine the effects of Exchange Fund activity within such limits. The major interventions of the British Exchange Equalization Account before May 1933, when it was still the only important Fund, are evidence of this, and it is clear that the major purpose of other Exchange Funds was to establish and defend "appropriate" levels, that is, to resist general trends in the exchanges.

General trends in the exchange rates of any country and the appropriateness of any range within which fluctuations may be confined by action of an Exchange Fund must always be in terms of some other currency or group of currencies. Before May 1933, the British Fund could intervene to influence the movement of the sterling rate in terms of a still important group of "gold" currencies including the dollar, but the judgment of the British Fund as to whether any given movement of sterling was an "undue" fluctuation was an independent judgment, and any action taken to prevent such fluctuations was a unilateral action.

In view of the inevitable international reactions of the manner in which the Exchange Funds of Great Powers were operated, proposals were made in the preliminary discussions of the World Economic Conference in London, in the summer of 1933, for cooperation between Exchange Funds, or even the creation of a Tripartite Exchange Fund to be operated jointly by the United States, the United Kingdom and France. No effect was given to these suggestions and when an American Stabilization Fund was established in April 1934 its dominant purpose was retaliatory. The aim of the American Fund like that of the British Fund was to promote greater exchange stability. But the theory of non-resistance to general trends was conspicuously absent from the American conception of exchange stability. The smoothing out of "undue" fluctuations due to temporary causes was indeed an important objective, but it was subordinate to the "defence" of the dollar against any general movement in other major currencies, sterling in particular, to levels that were not satisfactory to the United States. The defence of the dollar was conceived of primarily as a defence against competitive exchange depreciation, and the American Stabilization Fund was established as an instrument for preventing the dollar from rising in value in terms of other currencies.

The French Fund also was established to promote exchange stability. Its function, like that of the British Fund, was to iron out undue fluctuations in the exchanges, and like the American Fund, to defend the national currency. Defence of the franc, however, had a quite different meaning from defence of the dollar. It meant preserving the status of the franc as a free exchange and salvaging its leadership among continental currencies. The major preoccupation of the Fund was to combat the speculator and to facilitate, resist or reverse abnormal capital movements in accordance with the dictates of exchange rate policy. At the outset its duty was to confine the fluctuations of the franc in terms of gold currencies within certain prescribed limits. Resistance to trend was the essence of its task.

The Belgian, Swiss and Dutch Funds were established to defend their respective currencies at newly chosen levels in terms of the major currencies. Their aim, also, was to promote exchange stability,

but in their case this meant adaptation to an exchange rate system which they could not control or even largely influence.

The area of free exchange rates was much restricted during the years when Exchange Funds were being developed and generalized, and within this shrinking, though large, area Exchange Funds intervened in the free market for reasons as different as domination, retaliation, preservation and adaptation. In doing so, however, they were not all free agents, for the counterweight which they put in the scales of the free exchange market was, except for short periods, gold, and they were not the only official buyers and sellers of gold.

Exchange Funds were developed not to replace but to supplement the traditional system under which central banks and treasuries bought and sold gold at a fixed price. The influence of this fixed price, however, upon the behaviour of the exchanges was very different in the several countries. In some it remained dominant and in that case the Exchange Fund was only a handmaiden of the central bank or treasury. In others it was a background factor that from time to time influenced the scope, character and effects of the activity of the Exchange Fund, but left it the exclusive official agency for intervention in the exchange market. Thus in Belgium the obligation, and in Switzerland the decision of the central bank to buy and sell gold at a fixed price was the dominant influence governing the exchange rates of these countries, even though regular intervention in the market to iron out undue fluctuations was the accepted means for day to day management of the exchanges. It is therefore not surprising that in Belgium the Exchange Fund was supplanted and in Switzerland absorbed by the central bank. The willingness of the American Treasury to buy gold at a fixed price, and to sell it at a fixed price under certain conditions was the major factor in American intervention to control the exchanges. As long as the American Stabilization Fund conformed quite closely to this price in its own purchases and sales of gold it could be no more than a subordinate administrative agency of the Treasury. As such, however, it could perform certain important functions, such as the purchase and sale of gold abroad, the holding of gold abroad under earmark, intervention in the exchange market to combat speculators, and the giving of technical assistance in the transfer of large gold shipments. In all these respects it supplanted the Federal Reserve Banks, which had been well able in the past to perform these services. Moreover the powers granted to the Secretary of the Treasury to alter the price at which the Fund would buy or sell gold made it potentially a major factor in the control of rates under the new international gold settlement system, and therefore gave weight to the views of the United States in its dealings with other Exchange Funds, which were to a greater extent free agents. The French Fund, like the American Fund, was an independent entity through which all the official purchases and sales of foreign exchange were carried out, but

unlike the American Fund it was in practice the sole official French dealer in gold. Its freedom, however, was limited first by legal devaluation limits and later by publicly announced instructions from the government. The British and Dutch Funds, on the other hand, were not only independent entities through which the whole of the official exchange intervention was carried out, but were free of all such trammels. They could buy or sell gold at any price, either directly in the bullion market, or through the purchase of foreign exchange and its conversion into gold abroad, or through the sale of gold abroad for foreign currencies and the conversion of these into the home currencies. They could in effect carry out gold arbitrage operations not, as under the international gold standard, only when the exchange rates had reached a certain point, but at any exchange rate.

These differences were reflected in the relative importance of the central bank and the Treasury in the management of the various funds. At one extreme was the Swiss Fund which was exclusively managed by the central bank subject only to government concurrence in any major change of policy, and at the other was the American Fund which was managed not only for but by the Treasury. In the American case this symbolized a real shift in the seat of power over currency policy. Between these extremes were ranged the other funds which observed the general formula of management of the Fund by the Bank for the Treasury. This was not, however, achieved without difficulty in the case of the French Fund.

Self-imposed Limitations on the Scope of Exchange Fund Activity

Exchange Funds were guided in their operations by a modern form of the ancient injunction laid down for the Bank of England in the nineteenth century—to have regard for the state of the exchanges and for the safety of the establishment. They were unwilling to take risks which might involve them in the kind of loss suffered by the central banks of gold exchange standard countries immediately after September 1931. Under a self-imposed rule, they did not buy and sell currencies that could not be converted into gold at a fixed or agreed price. That is, they would not take long positions in such currencies. This very substantial limitation on the scope of their operations was increased by the difficulty of combining in one international gold settlement system the activities of Exchange Funds operating in countries in which the price of gold was fixed and those of Exchange Funds operating in countries where it was flexible. If the Exchange Fund of a country in which the price of gold was fixed bought the currency of a country in which it was subject to hourly fluctuations it ran a slight risk of being unable to convert that currency into gold without loss. On this ground the American Treasury refrained from buying gold in London and in retaliation refused to sell gold to the British Fund for a year and a half, while under the general rule of

not buying currencies for which gold could not be obtained the British Fund refrained from operating in the dollar exchange. The risks thus avoided were quite small when compared to the disadvantages of excluding the *Exchange Stabilization Funds* of the two major free exchange powers from each other's markets. After January 1934, the price of gold in London was *basically* determined by the dollar-sterling rate and the fixed buying price for gold of the American Treasury,¹ and the risks of holding dollars were therefore little greater than the risks of holding gold. For the same reason the losses that the American Fund might incur by buying sterling and converting it into gold were small. A far more substantial reason for this non-intercourse between the British Fund and the American Treasury was the unwillingness of the American Treasury to allow gold to be drawn to London as the result of a high price fixed unilaterally by the British Fund with a consequent depreciation of sterling in terms of dollars. The British Fund did not, in fact, transfer a major part of its operations to the bullion market until May 1938, but the American Treasury had fresh in its mind its own success in depreciating the dollar by raising the American price of gold.

Under the Tripartite Agreement of September-October 1936 a compromise was reached whereby the Exchange Funds of countries with fixed and flexible gold prices could have access to each others' markets and could cooperate in the management of gold shipments in both directions. The prices governing official transactions in the countries with flexible gold prices were held stable for a period of time (twenty-four hours) long enough to enable the authorities of countries with fixed gold prices to complete the conversion operation without risk. The importance of this agreement was in the antecedent understandings concerning the exchange rates on which the gold prices were based, and its effect was to allow the various Exchange Funds, Central Banks and Treasuries to operate an international gold settlement system that was an amalgam of conflicting techniques and principles.

The effectiveness of Exchange Funds in contributing to the operation of this system was in the first instance dependent on the amount and character of their assets.

The Assets of Exchange Funds: Their Appropriateness and Adequacy for Intervention in the Exchange Markets

An Exchange Stabilization Fund is formed by the segregation of certain assets suitable for intervention in the foreign exchanges. If this can be accomplished without utilizing the existing assets of the banking system or of the Treasury the capacity of the country's

¹ This influence was transmitted indirectly through the French franc which was held in a stable relation to the dollar by gold standard arrangements.

monetary authorities to control exchange rates is increased. As long as gold continues to be acceptable in the settlement of international transactions there are two ways of doing this:

- (1) the assignment to the Exchange Fund of the "profit" of a gold revaluation;
- (2) the issue to it of new government securities.

Devaluation profits and specially issued government securities are assets made available, and in a sense, "created," by the government and not by the banking system, and therefore add to the previously existing capacity of the authorities to intervene in the exchange markets. Once in possession of such assets Exchange Funds can easily acquire foreign exchange and domestic deposits to the extent necessary to make them going concerns.

An Exchange Fund whose assets are mainly in gold can support its own currency up to the extent of its original gold assets by exporting gold, acquiring foreign exchange and selling this foreign exchange for its own currency. Once it has begun to operate on this side of the market it can reverse its operations and support other currencies until it has become once more wholly a "gold" fund, or, if it chooses, a fund holding gold and foreign exchange or even foreign exchange only. An Exchange Fund whose assets are mainly in securities can support other currencies up to the extent of its original assets by selling securities for domestic deposits, purchasing foreign exchange and importing gold. Once it has begun to operate on this side of the market it can reverse its operations until its assets are once more wholly in securities, or if it chooses, in domestic deposits or in some combination of securities and deposits.

Within these limits Exchange Funds can operate on both sides of the market *with their own resources*. But if a Fund wishes to continue to support its own currency after its gold, or foreign exchange, resources are exhausted it must obtain gold either from the bullion market or the central bank. If it obtains gold from the central bank it becomes merely the channel through which the reserves of the central bank are exported; if from the bullion market it becomes merely the channel through which the flow of gold through the market is directed. This may add to the efficiency, though not to the capacity of the financial authorities of the country to support its exchanges, as is shown by the large private purchases of gold in the bullion market by the British Fund, especially in 1938 and 1939. If an Exchange Fund wishes to continue to support the currencies of other countries after its securities, or deposits, are exhausted it must obtain additional domestic deposits by the sale of gold, or foreign exchange, either to the bullion market or to the central bank. In that case it likewise becomes merely the channel through which the flow of gold through the market is directed or the reserves of the central bank are increased.

This also may add to the efficiency with which the currencies of other countries are supported, but it does not add to the capacity of the authorities to support them. This is illustrated by the contribution of the American Fund in facilitating the great movement of gold to the United States in 1938 and 1939.

In order to be in a position to iron out undue fluctuations in the exchanges an Exchange Fund must be in possession of both securities (or deposits) and gold (or foreign exchange). A Fund originally established by the issue of special government securities can be placed in this position without disturbing the banking system by exchanging part of its securities for gold or foreign exchange held by the central bank provided that the credit policy of the central bank is not dependent on the retention of these particular assets. A Fund originally established by the transfer to it of a gold revaluation "profit" may be placed in such a position by making the opposite exchange—gold for securities or deposits—provided that the resulting increase of the reserves of the central bank is not regarded as significant in the conduct of its domestic credit policy. This is a form of mobilization of the international reserves of the country which also may add to its efficiency in intervening in the exchange markets but does not add to its capacity to do so. This mobilization may be carried further by a transfer of assets of the appropriate kind from the Treasury or other government departments to the Fund. Such transfers were carried out by the British Exchange Equalization Account at the time of its foundation, in December 1936, in January 1939 and in September 1939.

Exchange Funds originally endowed exclusively with gold or securities may be placed in a position to iron out undue fluctuations in the exchanges by their own operations in the market provided that these result in an exchange of gold for securities (or deposits) in the first case, or of securities for gold (or foreign exchange) in the second case. This may occur in practice, as is illustrated by the experience of the Dutch and French Funds, or it may not, as is illustrated by the experience of the Belgian, Swiss and American Funds.

The transfer of devaluation profits to an Exchange Fund does not automatically make it a suitable instrument for ironing out undue fluctuations in the exchanges due to capital flights and speculation, and the same observation applies to funds exclusively endowed with government securities. Such funds are, moreover, in a position to defend their currencies against a trend in one direction only, and in the face of a trend in the other direction they must either remain dormant, acquire additional newly created assets of the appropriate kind, or become the channel through which the resources of the Treasury, the banking system, or the bullion market are made available for exchange intervention. It has been well said¹ that an Exchange

¹ By G. G. Johnson, *The Treasury and Monetary Policy 1932-38*, p. 73

Fund has intervened to iron out undue fluctuations in the exchanges if at the end of its operations the composition of its assets is the same as at the beginning, whereas it has intervened to resist a trend if the composition of its assets has significantly altered. But this is only true if at the beginning of its intervention its assets were both adequate and appropriate.

2. EFFECTS ON DOMESTIC CREDIT STRUCTURE

All exports and imports of whatever sort, whether of gold, balances, securities or commodities, affect either the credit base or the credit superstructure of any country using a modern system of money and banking, including countries using the device of clearing agreements. When these exports and imports are made by customers of banks they affect chiefly the credit superstructure (bank deposits) and when they are made by banks they affect chiefly the credit base (bank reserves). Any import, including a gold import, made by a customer of a bank offsets an export of corresponding amount in the international balance of payments and this produces a simple transfer of domestic deposits unless the import is financed by bank credit or the proceeds of the export are used to pay a debt to a bank. In this case imports and exports may be equal, but bank deposits may rise or fall. A gold import by a bank, though it offsets an export of equal amount in the international balance of payments, never produces a simple transfer of domestic deposits. The reserves of the banks are increased by the gold import, and the deposits created remain in the system. The opposite results follow from gold exports made by banks or by the customers of banks. Exchange Stabilization Funds as exporters and importers of gold can assimilate their operations to those of banks or to those of customers of banks carrying on their foreign transactions with or without the aid of bank credit. They cannot leave the credit superstructure wholly unaffected.

When a central bank or Treasury, rather than an Exchange Fund, is the chief agency for official intervention in the exchange market, as in the case of American gold purchases after 1934, then both bank reserves and bank deposits will be affected, and the responsibility for deciding whether or not these results will be offset will rest either with the central bank or with the Treasury. Under the American sterilization and desterilization policies of 1937-38 this responsibility was assumed by the Treasury. When an Exchange Fund is the chief intervening agency, but instead of using for this purpose a collection of assets segregated in its hands and held outside the banking system, utilizes the resources of the central bank, similar results will follow. At this point in the operation of Exchange Funds the frequent inability of central banks to vary their buying and selling prices of gold except by formal acts of devaluation becomes important. For Funds which, like the Swiss and American Funds and at times the French

Fund, bought and sold gold at prices identical with or deviating only slightly from the fixed price of the central bank this was not a serious problem. But for Funds which, like the Dutch Fund and the British Fund before March 1939, bought and sold gold at flexible prices differing widely from the fixed price of the central bank it did present a problem. If they wished to continue to intervene in the exchange markets after running out of the appropriate resources they had either to absorb large profits or losses in gold dealings with the central bank or borrow from the bank on security of gold. It has been calculated¹ that up to March 31st, 1938 the "losses" of the British Exchange Equalization Account on sales of gold to the Bank of England were £117 million, a serious impairment of the power of the Account to support sterling.² Such transactions are caused by the "needs of the Fund" when it can no longer intervene in the exchanges with its own resources, but the responsibility for deciding whether the effects of such intervention on bank reserves should be offset is shifted to the central bank.

When, however, an Exchange Fund operates within the limits of the assets created for it by the government or mobilized in its hands in the manner described above, it is free to choose whether or not its intervention in the exchange market shall have large or small repercussions in the domestic credit system, and in particular whether these shall be felt exclusively in the credit superstructure, or in both the credit base and credit superstructure. If it confines itself strictly to an exchange of government securities for gold, or gold for government securities according to the side of the foreign exchange market on which it is operating, and uses the central bank and Treasury only as intermediaries in its dealings with the market, then its intervention in the exchange market will have no effect on the primary reserves of banks. If its security dealings are with the public its activities will cause a simple transfer of bank deposits and if its security dealings are with banks its activities will cause a change in secondary bank reserves and in deposits, and a change in reserve ratios. The first of these effects is like that which follows any export or import carried out by customers of banks, and the second is like that which follows from such exports and imports financed by bank credit. When, however, an Exchange Fund is importing gold in an effort to prevent the disturbing effects of a flight of capital to its own country the transfer of deposits is from its own nationals to foreigners, and the increase in deposits is an increase in foreign deposits. It is this that chiefly differentiates the imports of gold by an Exchange Fund which is following a strict offsetting or insulating policy from the mass of ordinary im-

¹ By F. W. Paish, *Twenty Years of the Floating Debt*, Economica, August 1939.

² This was remedied by the passage of the Currency and Bank Notes Act of 1939 under which the gold assets of the Bank of England were valued weekly on the basis of the current market price and gold transactions between the Bank and the Account were carried out at the price fixed at the weekly valuation.

ports of the country. Such gold imports are often the source from which the deposits known as "hot money" or "refugee capital" are derived. These deposits are usually inactive and have a lower velocity than deposits created in favour of ordinary exporters, a circumstance that greatly reduced the inflationary effects of the gold inflow to the United States. If an Exchange Fund has withdrawn them from active commercial use by selling securities to the public or has induced the banks to create them by selling securities to the banks it is possible that its offsetting operations may have a deflationary instead of a neutralizing effect. But this is dependent on many variables—the actual velocity of the foreign deposits, the reserve position of the banks, and the flexibility of the reserve ratio policy. Thus the importance of this aspect of Exchange Fund offsetting operations, and indeed of the whole offsetting technique, was far greater in Great Britain, where the banks worked in a well established ratio system, than in Holland and Switzerland where reserve ratios were very flexible and in the United States where "excess" reserves were large.

An Exchange Fund that has met the impact of an inward flight of capital in this way is in a position to meet a reversal of the capital flow by an export of gold and its exchange for securities. In this way it will either cancel the deposits formerly created for foreigners or return them to its own nationals. An Exchange Fund that exports gold to resist the pressure on its exchange resulting from a flight of domestic capital and invests the proceeds in securities will either bring about a simple transfer of deposits between its own nationals if it buys securities from the public or cause a reduction in deposits and an increase in the reserve ratios of the banks if it buys securities from the banks. Under no circumstances will the ownership of bank deposits be unaffected, and under some circumstances the amount of deposits will be altered even though the reserves of the banks are completely unaffected.

Such a policy of offsetting may have three important by-products if rigidly adhered to: it completely demonetizes for domestic purposes that portion of the gold reserves of the country held by the Exchange Fund. In the case of a Fund established from the "profit" of gold revaluation this means that the whole revaluation "profit" is sterilized, and in some instances this has proved to be the most important single service of an Exchange Fund. The Belgian and Canadian Funds are examples and so is the inactive and larger part of the American Fund. Secondly, it will involve the government in profits and losses as the amount of this sterilized or demonetized gold rises or falls. As gold assets created by the devaluation are exchanged for securities the interest bearing debt in the hands of the public will fall and as gold is acquired in exchange for securities specially issued to the Fund it will rise. Public discussion of this aspect of Exchange Funds has most often been concentrated on the cost aspect of the

offsetting or sterilizing process because the British Fund and the American Treasury made large investments in segregated or inactive gold, whereas the French Fund which exported the greater part of the French devaluation profit did not practice an offsetting policy except on a very limited scale towards the end of its activity. Furthermore, the British Government did not allow the British devaluation profit to mature until the Currency and Bank Notes Act of 1939 and the Dutch devaluation profit was not allowed to mature till March 1940. Thirdly, the offsetting procedure causes substantial changes in the composition of the public debt, and when, as in Great Britain from 1933 to 1937, the activity of the Exchange Fund greatly increases the floating debt this is likely to lead to refunding operations which alter the cost of operating the Fund and may have deflationary effects. If the activity of the Fund is then suddenly transferred to the other side of the market and the floating debt is an integral part of the machinery of the money market and an essential part of the secondary reserves of banks, serious money market problems may be involved. In Great Britain this position was reached in 1938-1939 and the problem was solved by utilizing the proceeds of gold exported by the Fund, not to retire government securities, but to pay part of the costs of armament.

Exchange Funds need not follow the procedure of operating with a collection of assets segregated in their hands and held outside the banking system, and may utilize the resources of the central bank even before they are forced to do so by the exhaustion of their gold or their government securities. They may at any time sell gold to the central bank and invest the proceeds, thus increasing bank reserves. This happened when, for example, the British Fund sold gold to the Bank of England on account of "the needs of the Bank." They may sell gold to the market for central bank deposits and not invest these deposits, as was the general policy of the French Fund. Or they may buy gold with previously accumulated central bank deposits and not with funds obtained by the sale of securities, as was also the general policy of the French Fund. That is to say that whenever an Exchange Fund ceases to hold in its own hands all the gold it has acquired, and to offset the effects of its purchases and sales of gold it ceases to confine the effect of its operations to the credit superstructure and allows them to affect the credit base. Whenever it ceases to follow both the principle of segregation and of insulation it ceases to demonetize gold for domestic purposes.

The establishment of an Exchange Stabilization Fund, therefore, does not necessarily separate the domestic from the international reserve of a country unless the Fund becomes the exclusive holder of all gold reserves as it did in Great Britain in September 1939. But it does establish a flexible connection between them, which may range all the way from complete separation to complete identification. How

complete the separation will be at any time is partly determined by the monetary and banking law of the country and partly by the administrative decision of the "authorities."

The distinctions made in the preceding paragraphs stress, perhaps unduly, the separate entities, Exchange Fund, Central Bank and Treasury. Close coordination between the three under the collective name of the "monetary authorities" will make it possible to deal with the problem of regular official intervention in the exchange market and its domestic repercussions as a whole. Refined discussions of the technique of offsetting by Exchange Funds are often beside the point, for the central bank will take account of the net effect of this intervention in conducting its own open market policy. It is the "authorities" who must decide whether exchange stabilization activities shall or shall not have a given impact on the domestic credit structure. The role of Exchange Funds in influencing and giving effect to these decisions was, however, very diverse in the various countries and often very important.

The British Fund utilized from the outset a technique whereby the domestic effects of its intervention in the exchange market were not felt in the banking reserve of the country, but were absorbed by changes in the Public Deposits of the Bank of England and in the amount of government debt held by the public and the banks. As has been indicated, this involved a series of secondary consequences that formed part of the credit problem of the Bank of England and the fiscal problem of the government. But this technique was not rigidly observed at all times. When domestic credit needs required it, exceptions were made, and the operations of the Fund were allowed to influence bank reserves as well as bank deposits. The American fund was never the major instrument for American intervention in the exchange market, but as far as its operations went they affected bank reserves as well as bank deposits. This was also true of the gold purchases of the Treasury in general, but when domestic policy so required a very substantial exception was made, by raising reserve requirements and selling securities for the purchased gold. What was in England the rule was in America the exception and *vice versa*. The French Fund followed as a general rule the principle of letting the full effect of its exchange operations fall upon commercial bank reserves but not on central bank reserves and the Dutch Fund, to the extent of its limited resources, followed the British precedent.

This diversity in the constitution, administration, scope and policy of Exchange Funds does not lead to an inconclusive result in the appraisal of their contributions to currency machinery, but may be made the basis of certain broad generalizations concerning them.

3. CONTRIBUTIONS TO CURRENCY MACHINERY

These generalizations may be formulated and briefly commented on as follows:

(1) An Exchange Stabilization Fund is a device for restricting the movement of foreign exchange rates in a free market without sacrificing national independence in the choice of a domestic credit policy and its effective administration.

(2) Historically Exchange Funds were created to meet special problems differing considerably in various countries, but in broad perspective they were the outgrowth of the transformation of the international gold standard convention into an international gold settlement system. This transformation took place during a time of great international crisis, and was never completed. The characteristics which an international gold settlement system might be expected to develop under more peaceful conditions were not clearly established. Its main features, however, may be provisionally described as follows:

- a.* the continued acceptance of gold as a balancing item in international trade and as a convenient counterweight to be placed in the scales of a free market when exchange rates moved in undesired ways;
- b.* some degree of flexibility in exchange rates as a means of establishing international economic equilibrium;
- c.* some degree of separation between international reserves and domestic cover reserves;
- d.* some degree of subordination of international considerations to an autonomous trade cycle policy based on the idea that income is a more important factor in international trade than prices. All this is the product of an uneasy compromise between economic nationalism and membership in a world economic system, or some segment of a world economic system. For countries that have made this compromise Exchange Funds are appropriate instruments of management in the field of the foreign exchanges. Their importance as a contribution to currency machinery largely depends on how enduring this compromise may prove to be.

(3) The closer this compromise is to economic nationalism the less appropriate will be the device of an Exchange Stabilization Fund, and the more appropriate will be the device of Exchange Control. The distinction between the two is essentially that an Exchange Stabilization Fund uses the market and that Exchange Control replaces it.

(4) The closer this compromise is to membership in a world economy the less appropriate will be the device of an Exchange Stabilization Fund and the more appropriate the device of the international gold standard managed by a central bank.

(5) The greater the economic power and international financial influence of a given nation that wishes to preserve a free exchange

market and rejects exchange control, the more appropriate is the device of an Exchange Stabilization Fund, for two reasons. First, its exchanges on other major centres are "trunk line" exchanges and its monetary policy must be one not merely of adaptation to, but formation of the central core of the world's remaining system of free exchanges. In the absence of any international convention such as the international gold standard neither the completely uncontrolled fluctuation of such rates in response to market forces, nor their unilateral determination by a single power will prove a satisfactory or enduring alternative to exchange control. An Exchange Stabilization Fund may be either a major or a subsidiary means for guaranteeing a proper initiative to Great Powers in the control of such rates. Secondly, the major operations of speculators and the major movements of frightened capital and "hot money" pass over these exchanges in disturbed times, and the need for some device specially designed to prevent them from disrupting the exchange market and disturbing the money market is greatest in the major international financial centres. Moreover, the more highly organized and sensitive the mechanism of the money market the more effective are offsetting or insulating techniques, and this condition is most perfectly met in the major financial centres.

(6) The less the economic power and international influence of a given nation that wishes to preserve a free exchange market and rejects exchange control, the less its capacity to determine the behaviour of the "trunk line" exchanges and the more its currency policy must be one of *adaptation* to a given situation. The appropriate means of adaptation are: 1—Changes in its exchange rates on the major centres, often involving a choice of leadership when the trunk line exchanges are in motion. When some important country still maintains a fixed price for gold this may sometimes be accomplished by a formal act of devaluation. 2—The transmission of international pressures to the internal economy and internal economic adjustments; or 3—some combination of the two as, for example, in Australia in 1932. Of the two reasons given above for the use of Exchange Stabilization Funds by Great Powers the first is less applicable to smaller powers and in many cases it is not applicable at all. The second also is of clearly diminishing force in proportion as the markets are less well organized. In 1941 Bolivia established an exchange fund but it is very unlikely that Bolivia will be troubled by the problem of "hot money." Even in the smaller creditor powers with highly organized markets, such as Belgium, Holland and Switzerland, a highly developed technique of offsetting by a stabilization fund might involve a disproportionately disturbing effect on the government bond market when large capital movements were in progress to or from those countries. The experience of Great Britain in 1936-38, when the operations of the British Fund raised difficulties in the market for Treasury Bills, gives some weight to this view. In the smaller markets some of the objects of an

offsetting policy may be and, indeed, were achieved more easily by allowing reserve ratios to fluctuate.

4. SPECIAL POINTS

The foregoing discussion has stressed the contribution of Exchange Funds to currency machinery in its general setting. It has touched upon but has not brought to a focus certain special points concerning these funds that are of considerable practical importance.

The Secrecy and Scope of Exchange Fund Operations

Official intervention in the exchange markets to combat the activities of speculators must be secret to be effective, and it is undoubtedly true that the device of an exchange fund increases the secrecy with which such operations can be carried out. Exchange Funds do not currently publish balance-sheets which reveal, however dimly, the nature of their operations as central banks must do. This advantage, however, can be overstressed. The market usually knows when the "control" is intervening and through what brokers or agents, and the speculator will speculate on the probable future intentions of the "control" as well as on other probable events. While these intentions remain shrouded in mystery it is even possible that speculation will be increased and the nervousness of markets intensified under certain conditions. If, however, the emphasis of Exchange Stabilization Funds is on *stabilization* their general intentions are known, and secrecy, flexibility and large resources combine to give them a powerful and salutary influence over the markets. In order to exercise such an influence they should operate in all departments of the market. One of the features of the inter-war evolution of money markets was the decline in the importance of finance bills as instruments for transferring short-term capital from one market to another to take advantage of interest arbitrage and exchange arbitrage opportunities. Such transfers were increasingly made through the forward exchange market and consequently the effectiveness of Exchange Funds is increased if they deal in the forward markets and influence forward premiums and discounts. This was recognized by the French Fund particularly after June 1937 and by the British Fund in 1938 and 1939. Finally, the effectiveness of Exchange Funds in helping to establish and preserve some sort of orderly system of free exchange markets is much diminished if for any reason the major funds are excluded from operating in the major markets. As long as the price of gold in a given market rests upon prices of gold in other markets and exchange rates the operations of Exchange Funds are never entirely free from risk. This risk may be reduced by international agreement as under the Tripartite Agreement, but it should never be allowed to interfere with the major purposes of Funds. The spectacle of the exclusion of the British and American Funds from dealing in the sterling-dollar

exchange during their period of non-intercourse from April 1934 to September 1936 should not be repeated.

The Transfer of Central Banking Functions to Exchange Funds

It has often been said that Exchange Funds cannot do anything that central banks cannot do given equal resources, and that the creation of exchange funds is simply a recognition of the fact that the regulation of the currency, formerly a central banking function, has become a government function.¹ This statement is broadly true but it needs qualification in some respects:

(1) Exchange Funds can and do segregate a part of the financial reserves of a country outside the banking system. This is particularly important in the case of Funds founded by the use of gold revaluation profits. It is possible, of course, for central banks to perform this function. Suggestions were made that the British Fund should be amalgamated with the Issue Department of the Bank of England,² and the Swiss National Bank absorbed the Swiss Fund. Moreover, central banks can produce the same effect by not allowing devaluation profits to mature, as was done by the Netherlands Bank and by the Bank of England prior to March 1939. It is undeniable, however, that Exchange Funds provide a very convenient side-account in which to hold such profits, the outstanding example being the inactive part of the American Fund, and that they greatly assist the administration of an autonomous trade cycle policy by segregating the international from the domestic reserves of the country in a formal and officially recognized manner. They are an effective agency also for mobilizing the entire available international reserve in time of great need, as was done when, under the Currency and Bank Notes Act of 1939, all the gold of the Bank of England was transferred to the Exchange Equalization Account and used to support sterling under the strains of the war crisis.

(2) Central Banks can and do regularly intervene in the exchanges, not only to iron out undue fluctuations, but to resist trends, as was the case of the Bank of France particularly from 1926 to 1928, and to make domestic credit control effective, as in the case of many central banks operating under a gold or sterling exchange standard. They may cooperate with Exchange Funds established in other countries as shown by the practice of the Belgian National Bank from 1935 to 1939. But such intervention on a large scale in very disturbed times may involve central banks in difficulties in conducting their domestic credit policies, especially when the market responds sensitively to changes in their balance-sheet position in accordance with a long and firmly established tradition. This was shown by the intervention of

¹ *E.g.* Johnson, *op. cit.*

² N. F. Hall, *The British Exchange Equalisation Account*.

the Bank of England in 1931 and 1932. These difficulties are avoided by the use of an Exchange Fund. Moreover, an Exchange Fund managed by a central bank and endowed with substantial assets specially created for it by the government enormously increases the power of such a bank over its own market.

(3) Under a gold settlement system in which the price of gold is not fixed for all countries a separate Exchange Fund often provides a means for absorbing profits and losses arising from a fluctuating price of gold and trading in the exchanges which might prove embarrassing to a central bank, and which under a system of monetary nationalism are properly assumed by government.

(4) As long as gold is used in any way to limit the expansion of domestic credit, a separate Exchange Fund does provide a means first of separating the international from the domestic reserves of the country and then establishing a flexible connection between them. It can act as a filter for protecting the domestic market from the full impact of certain "abnormal" international transactions and transmitting to it the normal financial pressures arising from the general international trade and investment of the country.

(5) As indicated above, a separate Exchange Fund may under certain circumstances operate more secretly and effectively in the market than a central bank.

The Initiative of Funds: Flexible vs. Fixed Gold Prices

Experience under the "Tripartite Agreement" showed that it was a great technical convenience, though not an absolute necessity, for the operation of an international gold settlement system to have one major power maintain a fixed price for gold. In the absence of international agreement of some sort, the power that maintains this fixed gold price loses a certain amount of initiative in controlling the exchange rates of the system. If the consequences of this loss of initiative are regarded as serious, changes will be made in the fixed gold price or it will be abolished. Agreement on the general range within which trunk line exchange rates shall be allowed to fluctuate is essential to the operation of a successful international gold settlement system and even to the maintenance of free exchange markets. Exchange Stabilization Funds are instruments of control and cooperation, but they may equally be used for attack and currency warfare. The question of the initiative of Funds should not be decided on purely technical grounds, but the dominant Powers should accept a smaller share in this initiative as an inevitable consequence of their central position.

The Costs and Profits of Funds

Exchange Funds yield both costs and profits to the governments which operate them or for whose account they are operated. These are in the first instance trading profits and losses from their dealings in

foreign exchange, and inventory profits and losses from holding foreign exchange and gold. The inventory profits and losses on gold holdings are incurred by Funds in countries where the price of gold is not fixed, and have often proved to be very substantial as in the case of the British and French Funds. They are inescapable under an international gold settlement system with flexible exchange rates, and they have the effect of enlisting the self-interest of governments along with that of gold producers in maintaining a high price of gold. In the second place there are the changes in the interest burden on the public debt caused by interchange between gold and securities among the assets of the Funds. When a government-owned Fund established from gold revaluation profits sells gold and buys securities it reduces the interest burden of the public debt, and when a Fund established by the issue of government securities sells securities and buys gold it increases this burden. The experience of the British Fund in accumulating large stocks of gold from 1933 to 1937 and the experience of the American Treasury in carrying out a sterilization policy in 1937 and 1938 have unduly focussed attention on the costs of funds to the exclusion of their potential and often actual profits. Whenever an Exchange Fund segregates a part of the gold reserve of the country and also offsets the effect of changes in its gold stock by buying or selling securities these profits or losses also are inescapable. They are the consequence of partially demonetizing gold for domestic purposes while continuing to use it as a means of international payment. The type of security held by or bought and sold by Exchange Funds is usually the Treasury Bill, but when the Fund's sales of such bills unduly increase the short-term public debt and lead to refunding operations, the cost of an investment in a stock of gold by the government may be the interest charge on the refunding issues. Thus was the experience of Great Britain in 1935 and 1936.

The Subsidiary and Political Functions of Funds

Since an Exchange Fund is a large collection of assets in government or at least in official hands, it may be used for many purposes not directly connected with exchange stabilization. The American Fund, for example, probably bought silver at one time, and it is authorized to use such part of its assets as are not needed for exchange stabilization operations to deal in government securities. It is probable that it did on at least one occasion offer support to the government bond market. Since the outbreak of the present war it has been the source of various loans to China, both to provide the means for supporting the Chinese exchange by an exchange of silver for gold and as outright loans. It has also made loans to South American countries. In 1938 and 1939 the sale of gold by the British Fund provided the government with revenue for the purchase of armaments, and the assets of the Belgian Fund were turned over to the

government for the purpose of public expenditure of designated types and support of the government bond market. This could have been done without formally ending the life of the Fund. The gold assets of the British Fund were used after the outbreak of the war to provide the means of making war material purchases in the United States.

When used in these various ways these Funds really cease to be Exchange Stabilization Funds. They have now become merged in the general machinery of war finance and in their proper field have been replaced by various measures of exchange control. Their reemergence as Exchange Stabilization Funds in the future will be dependent on the desire and ability of governments to restore free exchange markets. Like all pieces of machinery they can never be more than a means, adequate or inadequate, appropriate or inappropriate, to achieve certain ends. Until the ends of post-war currency policy are defined no predictions concerning their future role can be ventured.

CHAPTER VII

EXCHANGE CONTROL

I. CONTROL OF CAPITAL MOVEMENTS

IN most cases the original object of exchange control in the early 'thirties was to curb an outflow of capital.¹ From the start, therefore, it is clear that exchange control and exchange depreciation cannot in all circumstances be regarded as alternatives. Devaluation may be the appropriate remedy for a persistent deficit in the balance of payments on income account; but it cannot be relied upon to stem a flight of capital. It may remove the incentives to capital flight, though under certain conditions it may, on the contrary, strengthen them.

We notice, accordingly, that in the early 'thirties there were a great many countries that practised both exchange control and exchange depreciation from the outset. Thus, most of the Latin-American republics whose currencies depreciated in 1929 and 1930 adopted exchange restrictions in 1931 or 1932. In Europe, a number of countries practising exchange control at the end of 1931, including Denmark, Estonia, Greece and Portugal, had already depreciated their currencies or were to depreciate them shortly afterwards.

The desire to prevent certain types of capital export in certain circumstances is understandable. A country suffering a capital outflow in time of depression is compelled not merely to keep in step with deflation abroad but to deflate to an even greater degree; or else it will be denuded of the international currency it normally requires for multilateral transactions in its foreign trade and for the settlement of temporary discrepancies in its current balance of payments. Indeed, sudden mass movements of capital funds are liable to sweep away a country's gold and exchange reserves whatever the degree of deflation enforced by that country.

But is exchange control the only means of preventing an outflow of "hot money"? In certain conditions it may well be. Discount policy has proved quite ineffective for this purpose. "There has been a growth of semi-speculative psychology among capitalists, who have become aware of risks which they never before considered and thus have become prepared to export capital on the slightest provoca-

¹ Certain countries including Hungary, Greece and Bulgaria appear to have suffered no capital outflow in the year in which they adopted exchange control (1931), and it seems that the chief original motive in these cases was to collect exchange for the government's foreign debt service. But in at least seven countries for which adequate data are available (Argentina, Austria, Czechoslovakia, Denmark, Estonia, Germany and Latvia), the fall in central gold and foreign-exchange reserves in 1931, which led to the imposition of control in that year, was far greater than any current deficit in the balance of payments and was obviously very largely due to capital outflows.

tion. . . ."¹ Consequently, when a "flight psychology" develops among capitalists, foreign or domestic, no increase in the discount rate may be sufficient to check it. Indeed an increase in the discount rate, by shaking confidence further, is apt to produce the opposite effect. It is the fear of capital loss, and not the attraction of interest returns, that becomes the dominant motive in such circumstances.

Moratoria may be declared or "standstill" agreements concluded in order to stop or to regulate withdrawals of foreign capital. But motives similar to those that have inspired foreign withdrawals have at the same time frequently led to wholesale exports of domestic funds.

In these conditions, to a great number of countries in the 1930's, exchange control seemed the only solution. It meant that all exchange transaction had to be centralized, so that applications for foreign exchange could be officially examined and, if found to involve a capital transfer, rejected.

Repatriation of domestic flight capital could be enforced, at least to some extent, by making it compulsory for residents in the country to declare or surrender their foreign assets. But foreign-owned capital funds could not easily be induced to enter or re-enter a country from which they were not free to depart. Even such regulations as were issued in Italy and Poland in 1936 and 1937, guaranteeing freedom of outward transfer to new investments, do not seem to have achieved their object of attracting foreign capital.

It was lack of confidence that made exchange control necessary for the prevention of abnormal capital exports. But experience has shown that the introduction of control itself has tended to upset confidence further, increasing the urge to export capital and making it necessary to tighten the control and to scrutinize even commercial transactions more closely. The process may thus be self-aggravating to some extent.²

Conversely, however, once the control has passed its most rigorous stage and has begun to be relaxed, the result may be a revival of confidence making possible a further loosening of the restrictions. It was in circumstances such as these that exchange control, though not removed, could be progressively alleviated in respect of foreign trade and practically confined to capital transactions in such countries as Austria, Estonia and Portugal after 1933 or 1934. By that time, the current balance of payments of these countries had been brought to a sounder condition through adjustments in exchange rates accomplished under the cover of exchange control. In Austria, for example, rationing of foreign exchange for import requirements became unnecessary; withdrawals of private foreign credits were covered by a

¹ B. Ohlin, "Mechanisms and Objectives of Exchange Control," in *American Economic Review*, Supplement, March 1937.

² Cf. League of Nations, *Report on Exchange Control* (1938), p. 27.

“standstill” arrangement and the control thus reduced itself to a general supervision of exchange dealings with a view to checking any abnormal expatriation of domestic funds. The public debt service on foreign account was maintained without interruption in all the three countries mentioned. These examples suffice to indicate the psychological and material conditions in which it proved possible to apply exchange control to capital movements without much disturbance to foreign trade.

In Latin America free exchange markets were officially recognized at an early stage, and in some cases—notably in the Argentine—capital transfers were subsequently permitted over the free market without hindrance. In the Argentine the system was so devised as to insulate commercial transactions, the bulk of which was settled through the official market, from any disturbing fluctuations caused by capital transfers on the free market. Thus in Latin America even the control of capital movements—which was the main original purpose of European systems—was, after a time, not taken too seriously. One of the main objects of exchange control in that area, as we shall see, was to secure foreign exchange for government debt service at preferential rates.

In considering the question whether it is possible to have a system of exchange control affecting capital movements alone—and particularly, of course, capital movements of the speculative or “disequilibrating” kind—we should remember that the inter-war period affords no experience of a generalized exchange control such as exists today (1944). Control was applied unilaterally by such individual countries as happened to be subject to a threat of capital flight. If control were exercised by capital-receiving as well as by capital-losing countries, the answer might be different. Attempts have, in fact, sometimes been made by capital-losing countries to enlist the help of receiving countries in curbing abnormal transfers; and receiving countries on their own initiative have sometimes taken action to this end. An agreement was concluded between the French and the Swedish authorities in 1936 by which the latter, in return for increased French import quotas on Swedish goods, undertook to supply information concerning funds of French nationals held in Sweden. In July 1939 an agreement for the exchange of information on private assets was concluded between France and the United States. But these agreements were primarily of a fiscal character, being designed to prevent tax evasion.¹ The countries concerned had no exchange control in the proper sense; their nationals could be more effectively taxed in respect of foreign assets, but were not required to surrender these assets; and there is no evi-

¹ For the detailed provisions, see League of Nations, *Treaty Series*, Volume CLXXXIV, No. 4241, and U.S. Senate, 76th Congress, 3rd Session *Executive Report No. 7*.

dence that the total movement of funds from France was appreciably affected by the agreements mentioned.¹

In general, under a system of "unilateral" exchange control, the answer to the question whether control can be confined to capital movements must depend upon the strength of the urge to export capital, which again depends on the magnitude of the risks which capitalists have in mind. Experience shows that if the urge is strong, specific prohibitions will be disobeyed and restrictions evaded, so that all foreign payments have to be examined and supervised, and all foreign receipts commandeered and mobilized. "If only a few categories of applicants for foreign exchange are subject to exchange-control restrictions, it proves difficult if not impossible to prevent applicants within this category from disguising their real status or changing their formal status from that of ineligible (or rationed) applicants to that of eligible or privileged applicants, and thus evading or avoiding the control."²

Even if all possible leakages were stopped, a flight of capital may still persist—a flight not into foreign currencies but into domestic goods, shares and other "real assets." At a time of depression such an increase in the domestic velocity of circulation may be welcomed by the monetary authorities. But it may tend to raise or keep up prices and consequently upset the trade balance, so that the strain is not suppressed, but merely shifted from the capital account of the balance of payments to the current account.

In fact, a strain on the current balance of payments frequently followed upon the imposition of exchange control on capital transactions, even where the currency was not patently overvalued at first. Whether the reason was an increase in velocity, as just mentioned, or

¹ Efforts of receiving countries to check undesired capital imports also met with little success. The President of the United States at a Press Conference in November 1936 stated that the problem of "hot money" was under study and that regulations or legislation might be required to deal with it. Later in the same month the U.S. Treasury began publishing weekly statistics of foreign assets in the United States based on detailed reports from bankers and brokers. But no restrictions on capital imports were actually adopted. The gold sterilization policy initiated by the U.S. Treasury in December 1936, while it eliminated some of the effects of the capital inflow on the domestic banking situation in the United States, could not prevent the depletion of gold reserves in the capital-losing countries.

Certain capital-receiving countries, however, adopted measures aimed at checking the inflow itself, instead of neutralizing its effects on domestic credit. In Switzerland, an agreement was concluded between the National Bank and the commercial banks in 1937 under which existing foreign-owned sight deposits ceased to bear interest and were converted into time deposits, while new foreign funds were accepted only on time deposit subject to notice of withdrawal, and a commission of 1% was charged on all foreign deposits. In Sweden also, the banks agreed upon drastic interest reductions on foreign-owned deposits. But "hot money" being usually little influenced by interest rates, it is doubtful whether these measures had any effect. At most, their effect was probably limited to diverting funds from one place of refuge to another, from places where interest returns could not be earned to places where they could be.

² J. Viner, *Trade Relations between Free-Market and Controlled Economies* (League of Nations, 1943), p. 28.

currency devaluation abroad or deliberate monetary expansion at home or simply a failure to enforce deflation to the same degree as the outside world, most of the European exchange-control countries experienced a worsening of their current balance of payments soon after the introduction of control in the early 'thirties. Whether this was due to exchange control *per se* or to the exchange rates maintained by these countries is a question to which we shall turn in the next section.¹ As a matter of historical fact, exchange control—introduced in the first instance mainly to prevent capital exports—soon shifted its emphasis to the control of commodity imports as the state of the current international accounts made it necessary to adopt severe rationing of foreign exchange for import needs combined with compulsory surrender of export proceeds. In Europe at any rate, this was a common sequence of events.

2. EXCHANGE CONTROL AND EXCHANGE RATES

In the Latin-American exchange-control countries in the early 'thirties, currency depreciation was, on the whole, greater than anywhere else. In Europe also, as noted earlier, there were a number of controlled currencies which were allowed to depreciate from the outset. But in the great majority of European exchange-control countries, the control came to be used as a means of protecting the old currency parities, at least for a time.

Under any form of currency management exchange rates may be said to be "controlled" in a sense. But there is a vast difference between a system in which stability of exchange rates is maintained through exchange rationing, and one in which it is maintained by a "buffer stock" of international currency with the support of appropriate domestic measures to influence the underlying conditions of supply and demand. Exchange stability under the former system is "artificial" in a sense in which it is not under the latter.² Since their "buffer stocks" of gold and foreign exchange were exhausted or nearly exhausted owing mainly to capital outflows at first and current deficits later, and since they were unwilling or unable to take the appropriate domestic action to influence the underlying conditions, the countries desiring at all costs to maintain their old parities were inevitably driven into a system of the former type.

Their desire to maintain the old parities is a matter which itself requires some explanation. The explanation is familiar. The following passage may be quoted from Paragraph 8 of the League of Nations *Report on Exchange Control* (1938):

¹ In a later section we shall also see that the working of the clearing arrangements which Germany imposed upon the south-eastern European countries tended to preserve or to accentuate the overvaluation of their currencies in relation to the free world market.

² Cf. Margaret S. Gordon, *Barriers to World Trade*, p. 50.

"When heavy withdrawals of short-term credits, in the spring and summer of 1931, began to shake belief in the new gold standard's ability to see its weaker adherents through the crisis, there emerged in the countries whose currencies had collapsed only a few years before a firm determination not to let it happen again. The destruction of savings and the economic disorganization produced by the inflations had wrought such havoc that this quite naturally appeared to be the basic evil which must be avoided at all costs. There was, indeed, in many of these countries, a tendency to identify inflation with devaluation. In view of the fact that these countries were heavily indebted abroad, and in view of the state of their public opinion, which was extremely distrustful of monetary changes, a depreciation of their currencies might have given a serious shock."

It may be recalled that in the last stages of hyper-inflation in Germany and elsewhere in Europe during the early 'twenties, exchange depreciation often became in fact if not in logic the leading element in the inflationary process. Memories of that experience played no doubt an important part in the popular identification of devaluation with inflation in Central and Eastern Europe in the 'thirties. The German trade unions in 1931 threatened, in the event of devaluation, to demand a scale of money wages based on foreign exchange rates.¹ If such a scale had been enforced, devaluation could have brought no relief. But it is far from certain that Germany could not have carried out a cautious and piecemeal devaluation such as that carried out by Austria during the years 1931-34 without much internal opposition and with little or no reaction on domestic prices and wages. After the advent of the totalitarian regime in Germany, domestic reactions could probably have been suppressed; but by that time exchange control and currency overvaluation had come to be used deliberately as tools of national policy.

More specific objections to devaluation were based on the fear of a rise both in import prices and in the foreign debt service in terms of domestic money. The fact was sometimes overlooked that a rise in prices of imported goods is bound to occur when exchange restrictions create an artificial scarcity of such goods on the home market, unless the goods are subjected to price control and rationing as they were in Germany. Moreover, at a time when world market prices were still falling, import prices in the event of devaluation would have risen very little if at all, as was shown by the Austrian experience. The cost of the foreign debt service, on the other hand, had already been reduced by devaluation abroad. Transfer of foreign debt payments requires a surplus in the current balance of payments. The maintenance of overvalued parities made it impossible to achieve that surplus, and led naturally to suspension of transfer.

¹ Howard S. Ellis, *Exchange Control in Central Europe*, p. 293.

The countries which for these and other reasons decided to protect the previous parities came to form an area of overvalued currencies extending over most parts of Central and South-Eastern Europe. The overvaluation existed in relation to the outside world. Within the area, disparities between individual currencies were less marked and, while trade with the outside world declined, there arose in consequence a tendency for trade to expand inside that area,¹ though as time went on it was more and more Germany's planned trade campaign rather than any "automatic" influence of currency relations that was responsible for this development.

As time went on, indeed, an increasing number of countries succeeded at least partially in breaking away from the area of overvalued currencies. The methods—such as "private clearings" and official exchange premia—by which these countries devalued their currencies in fact if not in law will be described presently.

Germany and, after the introduction of control in the spring of 1936, Poland were the two outstanding exchange-control countries that avoided devaluation, though Germany adopted even for trade purposes—as distinct from tourist traffic and blocked debts—measures analogous to devaluation: export subsidies, deviations from parity in certain clearing agreements, and depreciation of "Aski" marks, on which more will be said later.

The controlled currencies adhering to the old parities were not the only overvalued currencies. Those of the gold bloc prior to September 1936 were in the same condition. Any currency parity, however greatly overvalued, can be maintained if imports are cut down to the appropriate extent corresponding to the decline in the competitive capacity of exports. In the exchange-control countries the cut in imports was effected through exchange control. In the gold bloc countries it was effected mainly by the quota system, even though in view of their large gold reserves there was less need for these countries to avoid deficits in the current balance of payments. The share of both Germany and France in the total value of world trade declined. A large part of Germany's trade, however, was conducted at artificially high prices, so that value figures understate the decline in her share. It may be better, therefore, to consider the percentage declines in the quantum of French and German trade, which, as the following figures show, were of a similar order of magnitude:

<i>Changes in Quantum, 1929-35:</i>	<i>Imports</i>	<i>Exports</i>
France	—25%	—46%
Germany	—30%	—40%
All other countries	—16%	—14%
Total world trade	—18%	—18%

¹ See League of Nations, *Report on Exchange Control*, p. 33 and Annex V.

Within the European exchange-control area, trade developments differed to some extent according as currencies were—at least *de facto*—devalued or not. Subject to the reservation just mentioned, Germany's share in the total value of world trade declined from 9.75% in 1929 to 8.59% in 1936; that of Poland declined from 1.01% to 0.91%. On the other hand, seven exchange-control countries which had in effect devalued by 1936, all increased their individual shares, the sum of which rose from 3.50% in 1929 to 3.84% in 1936.¹

It was therefore the maintenance of overvalued currency parities rather than exchange control as such that was responsible for the contraction in trade. But, of course, exchange-control in the great depression was frequently used as a cover to permit the adoption of monetary expansion at home or at least to avert the need for further deflation, and in this sense exchange control may be said to have accentuated the overvaluation.

The working of exchange control for purposes of trade regulation is dealt with in the next section. The costs, risks and inconveniences of conducting trade under such a system may be considerable, and they undoubtedly act as a restraint on foreign trade. But this is probably a minor factor compared with the wholesale curtailment in the volume of trade that becomes necessary when the exchange is kept far above its equilibrium level. The uneconomic diversion of trade into bilateral channels, which has usually accompanied such a curtailment will be discussed in Section 4.

The methods by which exchange-control countries have adjusted their exchange rates towards the equilibrium level have taken a variety of forms. Open and outright devaluation has been one method. Another has been that of permitting exporters to sell the whole or a part of their exchange proceeds freely, or of legalizing a pre-existing black market where exporters evading the obligation to deliver their foreign exchange to the control had sold it at a premium to importers and others whose demand was not met from official sources. The extension of free-market transactions as a method of exchange adjustment has the advantage of allowing the "correct" rate to be gauged as a result of the free operation of demand and supply. In Europe, Austria provided the classic example of a gradual extension of the free market (the "private clearing," as it was called) followed by official devaluation to the level established in that market. Latvia pursued a similar course. In Bulgaria also, a private clearing market was given official sanction; but unlike Austria and Latvia, the official rate was kept unchanged. In all three countries the authorities retained a close super-

¹ The seven countries are: Bulgaria, Denmark, Estonia, Greece, Hungary, Roumania, Yugoslavia. The share of Austria and Czechoslovakia declined. (Cf. League of Nations, *Review of World Trade*, 1936, p. 25.)

vision of free-market dealings in order to enforce at any rate the prohibition on capital exports.

In Latin-American exchange-control countries, despite considerable devaluation of official rates, black markets developed from the outset and soon received official recognition. The free rates frequently underwent wide fluctuations. The margin between them and the official rates provided some indication of the severity of exchange control, as it reflected the strength of the demand which was not satisfied at the official rates. Up to the middle of 1937 the margin tended to narrow, as a result of either an appreciation of the free rate, as in the Argentine and Uruguay, or a further devaluation of the official rate, as in Bolivia and Chile. In the former case the contraction of the margin reflected a more liberal allocation of exchange in the official market owing mainly to the improvement in world demand for primary products. In the latter it represented a recognition of and adaptation to existing conditions. In both cases it undoubtedly indicated a relaxation in the stringency of control. This movement was sharply interrupted in 1937, when the drop in raw-material prices on the world market led to a renewed tightening of the restrictions and a widening of the spread between free and official rates.¹

Exporters in Latin-America were usually required to deliver only a certain proportion of their exchange receipts at the official rates, and in order to make it easier to enforce, this obligation was sometimes confined to one or a few of the chief export products. In many of these countries the main object of this official quota was to supply the government with cheap foreign exchange for the transfer of the government debt service abroad. Exchange depreciation had increased the cost of the service in terms of domestic currency, and the compulsory surrender of part of the export proceeds at official rates operated in effect as a special tax to meet that cost, a tax on the particular exports subject to this requirement. Even in countries where the official market was wider in scope, providing not only for the debt service but also for private import needs, fiscal considerations sometimes entered in the determination of exchange rates. There was usually a wide margin between the official buying and selling rates. The profits so realized were used in the Argentine, for instance, to finance government debt payments and subsidies to primary producers.²

An important form of exchange adjustment which we have mentioned was that practised in certain European exchange-control countries where the control itself—that is, usually the central bank—paid a

¹ See League of Nations, *Money and Banking 1937/38*, Vol. I (*Monetary Review*), pp. 33-36.

² It may be noted that, generally speaking, a wide margin between buying and selling rates acts as an independent restraint on trade. If the margin were narrowed—by raising the buying price and lowering the selling price of foreign exchange—this would, clearly, tend to increase both exports and imports.

premium on foreign exchange surrendered by exporters and imposed a surcharge on foreign exchange sold to importers. Yugoslavia combined this system with a free market where exporters were allowed to sell a certain proportion of their proceeds at a premium which was generally somewhat higher than that paid by the National Bank. In Hungary and Roumania free markets were not officially permitted, and all exchange transactions remained rigorously centralized. But official premia were introduced in Hungary in December 1932 and in Roumania in June 1935. These premia, which at first varied for different commodities and different currencies, were unified in both countries in December 1935 at a level of 50% and 38% respectively on the leading free currencies.

The exchange adjustments, whether open or concealed, were usually followed by some relaxation in the severity of exchange control at any rate in commercial transactions. The adjustments, though in the right direction, were often inadequate. Thus the Hungarian pengő, though it probably was undervalued in relation to the German mark, probably remained—even with the 50% premium—overvalued in relation to free currencies.¹

Apart from such remaining overvaluation, one of the chief reasons for the maintenance of exchange control in south-eastern European countries was the maintenance of stringent control in Germany. This alone, even if there had been no danger of capital flight, tended to make relaxation or removal of control in these countries difficult or impossible, since Germany was their principal trading partner. Germany used her system of control for the bilateral intensification of trade with these countries. In particular she used her clearing agreements and her overvalued mark to attract imports from these countries. Her success in this direction varied to some extent with conditions in the world market. The frozen German clearing balances tended to diminish after 1935 as world demand improved. Thanks to this improvement, Roumania was able to secure a reduction in the clearing value of the reichsmark in 1936. The decline in world markets starting in 1937 and Germany's territorial annexations starting in 1938 brought a renewed strengthening of German influence and a renewed tightening of exchange controls in the south-eastern area.

In Germany the differential export subsidies introduced in May 1935² and the limited exchange depreciation permitted in certain bilateral channels of trade were quite insufficient to offset the overvaluation of the mark. Under a stringent and all-embracing system of exchange control such as the German, exchange adjustments can

¹ Cf. Ellis, *Exchange Control in Central Europe*, p. 338.

² The subsidies were differentiated *inter alia* according to the elasticity of foreign demand. Any commodity with an inelastic foreign demand, or with Germany as the only important source of supply, was unlikely to get a subsidy. Hungary's exchange premia, before they were made uniform in December 1935, were differentiated on similar principles.

have no objectionable consequences in the form of disequilibrating capital movements. On this score there can be no difficulty in making any necessary adjustments. The purely nominal and artificial stability of exchange rates is of no benefit or importance under such a system. Yet Germany persisted in enforcing such stability. Even among academic economists in Germany there were some who attached to this kind of stability the same value as is usually and properly attached to exchange stability under a free currency system.¹ Such opinions may perhaps have been conditioned by the deep-seated "inflation-psychosis," discussed earlier in this section. But the German authorities had more solid reasons for maintaining the reichsmark parity by means of exchange control. Overvaluation, combined with bilateral clearings and other devices, was an instrument of national policy, useful for economic penetration in certain areas, and useful especially for stimulating the importation of vital commodities needed for war preparations.

3. EXCHANGE CONTROL AND TRADE REGULATION

We have already touched upon the general effects of exchange control on international trade insofar as they derive from inappropriate exchange rates enforced through exchange control. We now turn to some of the more specific aspects of trade regulation under exchange control.

The task of the control authority is twofold: (1) to secure the delivery of foreign exchange by exporters and (2) to allocate foreign exchange among importers and others.

In order to prevent commodity exporters from exporting capital through leaving their exchange proceeds abroad, governments have usually had to prohibit exports except under licence and to make the granting of licences conditional on the surrender of exchange receipts. Without such measures the surrender of export proceeds has often proved difficult to enforce. In the early stages of control in the Argentine it could not be enforced at all owing to the collective resistance of a few large grain-exporting firms.² The narrow range of export products in South American countries sometimes facilitated concerted action among exporters, and even when they did not consciously act in concert, their behaviour was sometimes effective in weakening the control. In Ecuador in 1933, for example, the mere rumour of an impending relaxation of exchange regulations led exporters to postpone shipments in the hope of securing better rates for their export bills later; in this way an "exporters' strike" developed, forcing the authorities to effect the anticipated change. The monop-

¹ Cf., for example, Fritz Meyer, "Devisenbewirtschaftung als neue Währungsform," in *Weltwirtschaftliches Archiv*, 1939.

² See Virgil Salera, *Exchange Control and the Argentine Market*, p. 57.

sony of the control authority may thus be faced with a designed or undesigned monopoly on the part of exporters.

In its second main task—the allocation of foreign exchange—the control has generally four kinds of decisions to make:¹ (1) how much to allot for different *purposes* (commodity imports, debt service, tourist traffic, etc.); (2) how to distribute the exchange available for imports among different *commodities*; (3) how to ration exchange among different *firms*; and (4) how to distribute the total among different *countries*.

All these decisions are of far-reaching consequence. The allocation of exchange among different commodities, for instance, may profoundly influence the country's internal structure of production. Distribution among competing firms, similarly, offers opportunities for internal economic control and, it may be added, for abuses of various kinds. The rationing of exchange for import requirements frequently leads importers to apply for larger amounts than they actually require, making it necessary to check their sales and production plans in great detail.

It is the distribution among countries that most directly affects international economic and monetary relations, giving rise almost invariably to discrimination, overt or concealed. There are, however, instances suggesting that discriminatory treatment under exchange control is not inherently necessary or inevitable. For three years—from the middle of 1931 to the middle of 1934—Germany allocated exchange to importers on the basis of their purchases during the twelve months preceding the imposition of exchange control. The allotments were cut down, by stages, to 5% of the basic quota. Although the system thus became increasingly stringent, there was at first little or no attempt to discriminate. Importers were free to spend their ration, expressed in reichmarks, on any foreign currency they chose.² The main reason for the adoption of this method was the threat of foreign retaliation against any attempt at discrimination. But it may also be mentioned that the Reichsbank at that time still had reserves of gold and freely convertible foreign assets. These were practically exhausted in the early months of 1934.

Although this system provided a uniform basis of allocation under all the four heads mentioned, it clearly was rigid and in the long run unworkable, "freezing" the particular pattern of exchange distribution existing in the base period.

But even if the distribution among firms and commodities is made by some rule of priority or by arbitrary decision in each case, it is still conceivable—and it has happened—that an importer to whom a

¹ See *League Report on Exchange Control*, pp. 38-39.

² It seems that subsequently, however, limits were placed not only on the total foreign-exchange purchases of each importer but also on the amounts he could use for imports from individual countries (*cf.* Ellis, *op. cit.*, p. 203).

certain amount has been allotted for a certain purpose is left free to choose the country from which the goods are purchased.

The actual trend in exchange-control countries in the 'thirties, however, was decidedly towards discriminatory practices. In almost all cases the allocation of exchange among different countries became subject to administrative discretion, and in these circumstances some form of discrimination or "preferential allotment" became practically inevitable. The discrimination was seldom overt; its objects were usually to evade the most-favoured-nation clause and to force trade into bilateral channels.

In an exchange-control system under which importers are not allowed to spend their exchange rations in any country according to their own judgment, the most favoured nation principle, designed to enforce equality of treatment, obviously tends to become meaningless. "The nature of trade agreements under exchange control is such . . . that while there may be practical certainty on the part of all concerned that discrimination is being practised, there are no unambiguous, clear, and rational criteria as to its existence or nonexistence, or as to the meaning of 'equality of treatment,' under exchange control."¹ This is so, of course, not only under exchange control but also under a system of import quotas or other quantitative restrictions.² In spite of this lack of definite meaning, free-exchange countries when concluding trade agreements with exchange-control countries have frequently insisted on the insertion of a most-favoured-nation clause in regard to exchange allocation. Thus under the Roca-Runciman treaty of 1933 the Argentine bound herself to accord most-favoured-nation treatment to the United Kingdom in allotting foreign exchange for imports. In fact, the Argentine control from 1933 on was so designed as to secure systematically preferential allotment to the United Kingdom. Practically all imports from countries with which the Argentine had an export surplus, the United Kingdom being chief among them, were allotted foreign exchange at the official selling rate, while exchange for imports from other countries, notably the United States, had to be obtained largely through the free market, where rates were appreciably higher or, when they declined in 1935, were subjected to a special surcharge to keep up the margin of preference to the former countries.

The trade agreements of the United States with exchange-control countries have contained various formulae to ensure "a fair and equitable share" in any allotment of foreign exchange. The only

¹ J. Viner, *Trade Relations between Free-Market and Controlled Economies* (League of Nations), p. 15.

² Literally, the most-favoured-nation clause if applied to exchange allocation or quantitative restrictions might require, in value terms, the same amount of imports from all countries, or the same amount per head of population or, in physical terms, the same quantity of the same goods from all countries. Clearly any literal application of the clause under these conditions results in absurdities.

formula of importance which had a definite meaning was that requiring the exchange-control country to allot the same percentage of foreign exchange for imports from the United States as the proportion of imports from the United States to total imports had been during a preceding "representative period."¹ This formula, it is true, tended to prevent discrimination against the United States, but it "froze" the position in the base period in a way which took no account of subsequent changes in industrial processes, price relationships, harvest yields, etc.; and it provided no positive definition of equality of treatment under exchange control. Real equality of treatment, aimed at ensuring multilateral trade in accordance with market criteria, is in the nature of the case impossible when the control determines not only the purposes, commodities and firms but also the countries to which exchange is allotted. But it may once more be recalled that allocation by countries, involving in practice discrimination, is not an inherently necessary feature of exchange control. It has in fact been absent in some systems, at any rate in the earlier stages. Discrimination by countries has generally been in the interests of "bilateralism." The methods and origins of "bilateralism" under exchange control will be discussed in the next section.

A distinction has sometimes been made between exchange control and other forms of trade regulation, such as tariffs and quotas, on the ground that the former restricts *payments* for imports while the latter restricts the actual movement of goods. The evolution of exchange control has tended to obliterate the distinction or to preserve it only in a legal sense. In the early 'thirties control was frequently confined to payment for goods already imported or still to be imported. Almost everywhere the result was frozen commercial debts. Traders were at liberty to import whatever tariffs and quotas allowed them to import; but when it came to paying for the goods they often found that their exchange applications were met only in part or only after a long delay. This was the origin of the "blocked" commercial balances which many countries, whether or not they practised exchange control themselves, accumulated in their dealings with exchange-control countries, and these blocked claims led to the use of clearing, funding or other arrangements designed to liquidate them.

As a result there was a marked tendency for exchange and trade controls to be more closely integrated. Imports were not admitted at all unless the importer could show the Customs officers an exchange permit guaranteeing the allocation of foreign exchange in payment for them; or else, under less stringent regulations, goods could be imported, but only those for which an exchange permit had been issued in advance were assured of the necessary exchange allocation. Thus, after 90% of the United Kingdom's blocked commercial claims had been funded under the Roca-Runciman treaty, the Argentine

¹ Cf. Viner, *op. cit.*, p. 51.

adopted a system whereby only goods covered by a "prior permit" of the exchange control board were assured of allocation at the official rate. But perhaps the best example, exhibiting all three possible stages, is the German experience up to 1935. The drastic reductions in the uniform quota, mentioned earlier, did not result in a similar cut in actual imports. Traders may have expected to obtain the necessary exchange by one means or another later, or they may have thought that the official quota would sooner or later be relaxed. In any event, there was a large volume of imports which could not be paid for, and especially after the virtual exhaustion of the Reichsbank's foreign reserves in the early months of 1934, the blocked commercial debts increased at an alarming rate. In September 1934, therefore, the "New Plan" was introduced, which marked the beginning of the second stage: no importer could count on getting the necessary exchange unless he had obtained a permit prior to importation. Yet goods could be and were imported without exchange permits. In June 1935, however, such imports were prohibited, and the exchange certificate became a necessary condition of Customs clearance.

Developments were similar in many other exchange-control countries. Sometimes the change was accompanied by a simple transfer of powers from the Ministry of Finance to the Ministry of Commerce or from the Exchange Control Board to an Import Control Board, with or without a corresponding substitution of import licences for exchange certificates. But such institutional changes were neither significant nor essential. When imports are admitted only under prior permits and when such permits, guaranteeing the release of foreign exchange for the goods to which they relate, are issued in strict accordance with the current supply of exchange, then the integration of exchange and trade control is complete, and exchange control no longer results in blocked commercial balances.¹

The trade agreements concluded by the United States with exchange-control countries during the later 'thirties contained a clause prohibiting the imposition of any restrictions on the transfer of commercial payments. Similarly, the recent British White Paper proposing an international clearing union states that "in any case, it should be laid down that members of the Union would not allow or suffer among themselves any restrictions on the disposal of receipts arising out of current trade or 'invisible' income."² It is clear that these clauses are compatible with the most stringent forms of combined exchange and trade regulation just discussed, as well as with complete freedom of foreign exchange transactions. "Blocked balances" are an avoidable feature of exchange control, but their avoidance does not necessarily mean a control of diminished severity.

¹ Czechoslovakia affords a good example of this system: she preferred from the start to limit imports rather than restrict payment for imports. Cf. Antonin Basch, *The Danube Basin and the German Economic Sphere* (1943), pp. 75, 84, 110, 121.

² *Proposals for an International Clearing Union* (April 8th, 1943), §38.

4. EXCHANGE CONTROL AS AN INSTRUMENT OF BILATERALISM

Before primitive man discovered the use of some generally acceptable commodity as a medium of exchange, bilateral barter was the only means whereby an individual could escape from a condition of absolute autarky (*i.e.*, self-sufficiency), exchange his products for those of his neighbour and so increase his material well-being. Just as the complicated process of exchange between the inhabitants of a modern state is made possible by the existence of a generally accepted monetary medium, so the multilateral exchange of goods between countries presupposes a stock of international currency, a medium of multilateral settlement.

In the great depression, as a result of the breakdown of the gold exchange standard, the sudden contraction of international credit, capital flight and overvalued currency parities, certain areas were practically denuded of their stock of international currency, and were, at the same time, determined to resist exchange depreciation. Since, in the absence of money, barter is the alternative to strict autarky, these areas resorted to international barter, using exchange control as an instrument for this purpose.

International barter need not be confined to the pairing off of specific goods between two traders resident in different countries. Such individual "compensation" deals became indeed quite common in Central and South-Eastern Europe. But they were troublesome to arrange and to supervise. The bilateral offsetting of a country's total imports from another country against its total exports to that country was in essence a form of international barter, but one which avoided the difficulties and inconveniences of specific barter deals. The clearing agreement, by which imports and exports were thus offset between pairs of countries without the use of an international medium of payment, became the characteristic method of international barter under the regime of exchange control.

This interpretation may help to explain the basic nature of bilateralism, but it needs to be qualified as well as elaborated.

First of all we may notice that the tendency towards bilateralism, though it received its fullest expression under exchange control, was not confined to exchange-control countries.¹ Needless to say, if any country starts a policy of bilateral balancing this will tend to have effects in the same direction on the trade of other countries. But bilateralism seems also to have sprung from independent sources outside the areas of exchange control. Thus the import quotas introduced by France and other members of the gold bloc endeavouring to keep up

¹ As this discussion is mainly concerned with the monetary aspects of the problem, the reader must be referred to the annual *Review of World Trade and Balances of Payments* published by the League of Nations during the 'thirties and, more especially, to *The Network of World Trade* (League of Nations, 1942) for a general analysis of the origins and effects of bilateralism in international economic relations.

their currency parities were well adapted for cutting down imports from particular countries with which trade was passive and for bargaining purposes to promote exports to these particular countries. The quota system proved in fact a powerful instrument for equalizing the imports and exports exchanged between any two countries. France's trade, just as Germany's, was thus increasingly diverted into bilateral channels.¹ Great Britain had no currency overvaluation to contend with after 1931, but exports lagged behind the internal recovery and there was a desire to recapture lost markets or to find new ones. Great Britain herself practised neither exchange control nor, except to a limited extent, import quotas. But in her relations with certain exchange-control countries with which her trade was passive—including, *e.g.*, the Argentine, Denmark and Estonia—she was able to persuade these countries to operate their exchange allocation in such a way as to increase their purchases of British goods.²

Indeed, as soon as exchange control took over the allocation of foreign means of payment not only among different firms and commodities, but also among different countries, allocation on the basis of bilateral criteria came to be practised almost universally, either under external pressure, or simply by autonomous action of the national authorities.

With regard to clearing agreements, which we have described as the typical method of international barter under exchange control, there is one important qualification to be made. Clearings were often imposed not to equalize trade in bilateral directions but to secure the transfer of debt service by the earmarking for this purpose of bilateral *surpluses* in trade. This does not invalidate our description, if under "barter" we include not merely the exchange of goods but also "invisible" items. But it does modify the picture in so far as clearings were not resorted to by exchange-control countries for lack of international currency, but were imposed at the initiative of free-exchange creditor nations.

Thus the German debt moratoria of 1933 and 1934 were followed by the imposition of compulsory clearings by the Western European creditor countries. These countries, as it happened, had normally substantial import surpluses in their trade with Germany, and so were in a position to collect the service on the German loans they held through the clearings out of the proceeds of Germany's exports to them. This method was not open to the United States, which had an export surplus with Germany, and the United States objected in principle to

¹ Cf. *Review of World Trade, 1935*, p. 64 (diagram).

² The Argentine, as already mentioned, used a system of differential exchange rates for this purpose. In other countries the same effect was achieved simply by the allocation of import licences or exchange permits. The consequent "bilateralization" of Danish trade stands out very strikingly in the diagram referred to in the preceding footnote. For Estonia, see the clause in the Anglo-Estonian trade agreement quoted by Viner, *op. cit.*, pp. 47-48.

this system of collection, under which, as pointed out by Secretary of State Cordell Hull, the foreign exchange proceeds of the debtor country were not divided among its creditors in proportion to the size of their claims but in an arbitrary manner.¹

But on other grounds also the working of these clearings proved unsatisfactory. If Germany's surplus of exports to the Western creditors had remained the same, it would have been more than adequate to meet the debt service. In fact this surplus had previously enabled her to finance a large part of her raw-material purchases from overseas countries, with which her trade had normally been passive. But the overvaluation of the mark led to a rapid fall in this surplus, which threatened to make even the transfer of the debt service impossible. Since the creditor countries usually preferred to receive their debt payments in full rather than keep up their exports, they often saw themselves obliged to place restrictions on exports to Germany. Germany, for her part, extended her exchange permit system to imports from clearing countries, which had at first been exempt.

This state of affairs led to the adoption by Germany of bilateral arrangements with overseas raw-material producers, especially in South America, and to the forcing of German exports to them with the help, as noted below, of depreciated "Aski" marks.

To the free-exchange countries, bilateral clearing often proved objectionable not only because it diverted trade but also because it involved *them* in the need for applying various restrictions characteristic of the exchange-control countries. It was, *inter alia*, for this reason that in November 1934 the Anglo-German clearing was transformed into a "payments agreement," and the example was followed in a number of other cases. Under this agreement 55% of the proceeds of German exports to the United Kingdom were to be used for German imports from the United Kingdom, the rest being earmarked chiefly for the debt service. The advantage of the new agreement, and one that was highly valued in British business circles, was that traders in England made and received their payments in free exchange in the usual way; on the British side there was no longer any need for a clearing office or for official certificates and waiting periods. But in essentials the agreement was not different from a clearing. All it meant was that Germany undertook to do all the necessary controlling of trade and payments on her side, so as to maintain the ratio agreed upon and to ensure the prompt settlement of accounts. Here again we notice, as we noticed before in this section, that in certain circumstances a free-exchange country in its dealings with an exchange-control country may make use of the latter's control machinery and avoid introducing any restrictions itself.

Germany often asserted that the clearing system was forced upon

¹ U.S. Department of State, *Press Release*, May 23rd, 1936, as quoted by H. J. Tasca, *World Trading Systems*, pp. 153-154.

her by "rapacious creditors."¹ In fact, Germany herself had started bilateral clearings long before she declared her transfer moratoria. Not only had she introduced clearings (of the so-called "Swedish-Agreement" type) with free-exchange countries before 1934 in order to make possible imports in excess of the rapidly decreasing exchange quotas allotted to her importers, but in the spring of 1932 she had also concluded a number of clearing agreements with exchange-control countries in Eastern and South-Eastern Europe, in order to enforce repayment of German commercial claims blocked in these countries and at the same time to open up bilateral channels of trade without the medium of foreign exchange.

The blocked balances arising under exchange control, and the desire to liquidate them, were thus part of the reason for the rise of clearing agreements. But clearing agreements themselves, as they hardly ever achieved an exact balance within a short period such as a year, gave rise to further blocked claims, which contributed to their survival.²

Germany's clearing agreements with the eastern and south-eastern countries not only liquidated rapidly Germany's previous commercial claims, but, further, resulted in large uncleared reichsmark balances in favour of these countries. This was a natural consequence of the reichsmark's overvaluation, which made the prices offered by Germany appear attractive while making German goods expensive. The German buying campaign in these countries weakened their currencies and their competitive capacity in the world markets for two reasons: German purchases pushed up prices of their export products directly; and as the uncleared reichsmark balances had to be frequently taken up by the central or commercial banks, they led to an expansion of credit which tended to drive up the general level of prices and costs in these countries.

For Germany the clearing system provided a welcome means of obtaining forced loans from them in the form of uncleared balances. The total of these balances reached a maximum in 1935. From 1935 on, the revival of world demand improved the free export markets of these countries, lessened their dependence on Germany and made it easier for them to obtain reductions in the rate at which the reichsmark was valued for clearing purposes, though Germany, even when she had to permit deviations from the official par, still insisted on fixing the value of the reichsmark as high as possible. The recession in the world market in the latter part of 1937, and, later, Germany's territorial annexations tended once more to increase the blocked clearing claims of the eastern and south-eastern area; and after the outbreak of war, the German clearing system became predominantly what it had been partly before—a method of economic exploitation,

¹ Cf. Ellis, *op. cit.*, p. 202.

² Cf. League of Nations, *Enquiry into Clearing Agreements* (1935), p. 21.

not only in this particular area but also in the occupied countries of Western Europe.

The German clearing system has sometimes been compared to exchange-standard arrangements such as we discussed in Chapters II and III. Was the German system—the “reichsmark area,” as it was sometimes called—essentially similar to the gold exchange standard or the sterling area? Whether or not the reichsmark balances were regarded as cover for reserve purposes—as a rule they were not—they were in fact frequently acquired and held by the central banks either directly or indirectly by way of advances to the treasury or some other agency holding them. Thus they served as a basis of credit expansion, and changes in their amount tended to produce changes in the domestic credit base just as foreign balances under the gold-exchange or the sterling-exchange system. But the parallelism goes no further. Apart from obvious differences in the background and motives of policy, there is this fundamental difference that whereas the foreign exchange reserves under the gold- or the sterling-exchange system constituted a form of international currency—which indeed was the reason why banks held them—those under the reichsmark system were blocked and could not be used as means of international settlement. The main reason why they could not be so used was that Germany was anxious to secure the maximum volume of commodity imports by forced loans of this kind and that therefore she found it advantageous to deal with each country on a bilateral basis.¹

From a more technical point of view, there was another reason for this. Germany's exchange rates with individual countries in the “reichsmark area” were reached by a process of bilateral negotiation the outcome of which frequently varied according to the bargaining strength of each country, and were fixed and maintained at arbitrary levels at varying degrees of overvaluation for the reichsmark. In consequence these rates did not form an arithmetically consistent network. Thus country A's rate with Germany was not necessarily the same as B's, if B's rate were expressed in A's currency at the rate of exchange between A and B, or if both A's and B's reichsmark rates were expressed in a free currency such as the dollar at the rates of the two countries on the dollar. In such cases of inconsistency, even if Germany had permitted transfers of reichsmark balances between A and B, they would have involved losses to one or the other.²

¹ Had the reichsmark balances been negotiable, a country with a deficit in her balance of payments with Germany but with a surplus in her transactions with another country could have obtained reichsmarks from that other country with which to cover her deficit with Germany. As it was, the only means open to her was to increase her exports to Germany.

² It may be added that in 1940 Germany developed a scheme for a multilateral European clearing system as part of the “New Order.” For this purpose it was obviously necessary to have a system that was arithmetically consistent, and various adjustments were made in Germany's exchange rates with the south-eastern countries in order to secure strict uniformity of the reichsmark's official clearing value.

Overvaluation was a deliberate German policy; it is not an inevitable feature in a bilateral clearing system. In theory, an equilibrium rate of exchange between two countries is conceivable, a rate that ensures the offsetting of all reciprocal payments between them, including, if necessary, payments on account of debt service. But it is clear that the structure of such bilateral equilibrium rates between pairs of countries would not be arithmetically consistent. This lack of consistency would, of course, be of no consequence—indeed, it would be natural—in a system in which multilateral payments are impossible.

In her trade with a number of South-American countries, as already mentioned, Germany developed what was in fact a bilateral mechanism of clearing, but one in which exchange rates were given a certain freedom to fluctuate in response to bilateral supply-and-demand conditions and in which the reichsmark depreciated in varying degrees from its official par value. These so-called "Aski" arrangements were subjected by Germany to various restrictions which in the course of time became more and more stringent. They did, however, provide an example of bilateral clearing in which the exchange rate tended to approach the bilateral equilibrium level. They also showed that, naturally, the rates between the reichsmark and the currencies of each of these countries moved more or less independently and that there was no arithmetical consistency between them.

The attention given in the preceding pages to Germany's role in bilateral exchange clearing is justified by her relative importance in the system. The spread and persistence of bilateral clearing in the world was doubtless largely due to Germany's influence; and, as noted before, Germany's policy in this regard was conditioned not only by monetary difficulties but also by political aims. As an indication of Germany's share in the bilateral clearing system it may be mentioned that in 1937, when about 12% of total world trade passed through clearings,¹ Germany's clearing trade alone constituted about 5% of total world trade. Her relative importance in total world trade conducted on a clearing basis is therefore roughly measured by the ratio of 5 to 12—a ratio of about 40%. But these figures refer to clearing agreements in the narrow sense and do not include other similar devices such as payments agreements, "Aski" arrangements and individual barter deals. With these included, Germany's clearing trade constituted about 80% of her own foreign trade and about 7% of total world trade. Her share in "world clearing trade" in the wider

(Cf. League of Nations, *World Economic Survey, 1939/41*, pp. 158-159.) As the war went on, however, Germany used her clearings increasingly as a means of "external war finance," and the multilateral system remained a paper scheme without practical significance.

¹ League of Nations, *Commercial Policy in the Interwar Period: International Proposals and National Policies*, p. 70.

sense may well have been higher than 40% if, as is likely, she made greater proportionate use of the other devices mentioned.

The comparison of clearing trade with total world trade tends to overstate the share of the former because trade under clearings was almost invariably conducted at higher prices than in the free world market. This was partly due to the overvaluation, compared with free currencies, of the currencies of exchange-control countries trading with each other through clearings. But in part it was also due to the restricted choice of markets open to a clearing country. The possibility of selling in the free world market set a limit below which clearing export prices could not fall unless subsidized. The import prices of a clearing country, however, were naturally often much higher than if it had had a free choice—if it had been free, that is, to buy in the cheapest market. And under the stimulus of the distorted price relationships thus resulting, clearing partners engaged their means of production in lines for which they were not best suited or for which they were quite unsuited.

The waste of economic resources and the loss of economic welfare inherent in what is essentially a system of international barter need not be further dwelt upon. As stated at the beginning of this section, the system is analogous to inter-personal barter in a primitive society. Barter, in such a society, is preferable to complete self-sufficiency of each individual or family; but it cannot produce that division of labour which money ensures in its role as a means of exchange. In like manner, exchange-control countries found "that, in dealing with another country which has also prohibited the transfer of foreign exchange, the clearing agreement may be of service inasmuch as goods can continue to be exchanged between the two countries, whereas, in the absence of such an agreement, trade would finally cease."¹ It is the most elementary function of a currency system, national or international, to make barter unnecessary and multilateral exchange possible.

5. THE PRINCIPAL FUNCTIONS REVIEWED

Undoubtedly the experience of the 'thirties has tended greatly to discredit the system of exchange control. For one thing, exchange control often became associated in the minds of people in free countries with the policy of war preparations and national expansion pursued by Germany.

Exchange control as such is, of course, merely a tool, and may serve various purposes. To blame the tool for the wrongs of a particular policy which made use of it may have been natural enough in the circumstances but does not help in a technical analysis of the subject.

It has also been a widespread opinion that exchange control as such played a disastrous part in strangling international trade. The admin-

¹ League of Nations, *Enquiry into Clearing Agreements*, p. 48.

istrative burden of exchange control certainly increases the cost of trading and so tends to limit trade in the same way as an increase in transport costs. But we have seen that exchange control, though first adopted chiefly as a means of stopping capital flight, was often used—especially in Europe—to maintain currency parities far above their equilibrium level. In these cases it was currency overvaluation rather than exchange control as such that was ultimately responsible for the contraction in trade. Exchange control was one means of enforcing an overvalued parity; it was not the only means. France and the other members of the gold bloc had no exchange control. Instead they used quotas and other import restrictions in their long struggle to maintain the old parities. As we have seen, France and Germany in 1935 showed approximately the same percentage cut in the quantum of their foreign trade—a far greater percentage cut than the rest of the world. Among European exchange-control countries those that succeeded in adjusting their exchange rates in one way or another towards the equilibrium level actually increased their share in world trade while others, such as Germany and Poland, saw their share diminish. We thus have two independent comparisons: (1) a comparison of two countries with overvalued currencies, one without, the other with exchange control; (2) a comparison of two groups of exchange-control countries, one with, the other without or with less heavily overvalued parities; and we find that the volume of trade varied among them not according to the existence or non-existence of exchange control but rather according to the currency's external value.

That the mere rate at which one currency is exchanged for other currencies can have effects of this sort is not an easy or familiar notion to the general public, whereas the instruments used to support an overvalued currency—exchange control and quotas, among others—are immediately evident and so are apt to be regarded as the real cause of the fall in trade. But it should be clear that a country with an overvalued currency necessarily suffers a decline in its competitive capacity to export and that consequently its imports, in so far as they must be paid for by exports, have to be cut down accordingly; the means by which the cut is effected are of secondary interest; they may be exchange restrictions, import licences, quotas, prohibitions or even tariffs. In the conceivable extreme case where a currency's external value is so high that exports decline to zero, the result would be complete national autarky.

The experience of the pre-1914 era was of little or no help in developing a general realization of these consequences. Before 1914 there existed a coherent and, for the most part, long-established system of exchange rates in close harmony with national price-levels. The disparities which emerged from the break-up of that system after the first world war and again—after the brief stabilization period—in the world depression were greater than any the 19th century had

to cope with, and were so great that no practicable adjustment of national price-levels could remove them.

Capital flight, withdrawals of foreign credits and deficits in the current balance of payments resulting from overvaluation combined in varying degrees to drain away the international currency reserves of many of the countries which resorted to exchange control in the 'thirties. In consequence, these countries sought to maintain their trade by what was essentially a form of barter, namely, the reciprocal offsetting of transactions between individual pairs of countries without the medium of international currency. The clearing agreement was the typical instrument of bilateralism under exchange control, though similar results could be obtained more informally through discriminatory allocation of foreign exchange on bilateral lines. But the tendency towards bilateralism was not confined to exchange control countries. Here again we find that a highly objectionable policy commonly associated with exchange control was not due to exchange control as such but to certain underlying conditions, some of which were monetary (over-valuation, lack of international currency, etc.) while others were not strictly monetary (*e.g.*, the search for export markets to reduce unemployment at home) or not even economic. We have seen that exchange rationing is both conceivable and workable without discrimination as to countries; there may be strict allocation between different purposes, commodities and firms, and yet the importer may be left free to spend his ration in whatever country he chooses.¹

But *rationing* of foreign exchange for trade purposes would not be necessary at all with a "correct" rate of exchange. In that case, though all exchange transactions may have to be supervised, rationing in the proper sense could be confined to capital transfers. With a "correct" exchange rate the balance of payments on account of trade and other normal transactions would be in equilibrium, which means that, if we neglect "invisible" items, the goods which traders find it profitable to export at that rate would yield enough foreign exchange to pay for the goods which traders find it profitable to import. Needless to say, the conditions of equilibrium are continually subject to change. Temporary changes and the discrepancies in the balance of payments resulting therefrom could be met by variations in the country's international currency reserve or by equilibrating international credits. A persistent need to draw upon these reserves or credits—or, in the absence of such facilities, a persistent need to ration foreign exchange for imports—would itself be a symptom of a more than temporary

¹ It seems doubtful whether allocation by countries is any more inherently necessary under exchange control than is the tying of consumers to a particular shop under wartime rationing of consumption, though of course there is no close analogy between the two cases.

disequilibrium, which might be corrected by an adjustment of the exchange rate.¹

Exchange control may be viewed as part of a tendency towards increased state intervention and planning in the domestic economy. As we are concerned with the monetary aspects of exchange control, there is nothing we need say on this except perhaps that, for this purpose, direct trade control and direct state trading are on a par with exchange control and would seem, indeed, to be more natural and suitable in some respects.

Like state trading or quantitative trade controls, exchange control may be used and, as we have seen, has been used with a view to improving a country's terms of trade at the expense of other countries. In a word, exchange control may enable a country to act like a discriminating monopolist in its foreign trade relations. Germany thus practised monopolistic discrimination among different countries and different commodities according to the elasticity of demand. The "success" of any such policy evidently depends on the presence of weaker or less closely organized trading partners. In any case exchange control, when used as one of the several possible means of monopolistic exploitation in foreign trade, becomes primarily a matter of commercial rather than monetary policy.

Next we may consider exchange control as a means enabling an individual country to pursue an independent policy of preventing depression or promoting recovery from depression. Exchange control places "a barrier between world and domestic prices, so that monetary and general economic policies could be chosen and executed without regard to their effects on the balance of payments."² An autonomous business-cycle policy in the face of depression abroad may render a currency overvalued and so may create a deficit in the balance of payments. Exchange rationing may be imposed to close the deficit. A country adopting such a policy may thus deliberately sacrifice some of the potential benefits of international division of labour in return for fuller employment at home, and it is quite possible that the immediate net effect on its real national income may be favourable. But is the sacrifice necessary? Why maintain the currency above the (new) equilibrium level? Under exchange control those disequilibrating capital transfers which provide one of the main objections to frequent

¹ Moreover, a system is conceivable, though no doubt difficult to enforce in practice, under which the exchange rate would be free to adjust itself to a changing equilibrium level. Exporters would be required to sell their proceeds in the foreign exchange market. Importers and others wishing to buy foreign exchange would be admitted to that market after proper examination of their *bona fides* and of the purposes for which they intend to buy, so that any abnormal movement of capital could be excluded. Once admitted, they could be left free to buy any amount of any currency, and the exchange rates would fluctuate with the current market supply and demand. Though freed from the influence of disequilibrating capital movements, the system would suffer from the disadvantages of fluctuating exchanges.

² League of Nations, *Report on Exchange Control*, p. 22.

adjustment of exchange rates are ruled out in any case. Nevertheless, as observed in Chapter V, a general stability of exchange rates in any international currency system is desirable also on other grounds. The need for short-term exchange adjustments as well as the use of exchange control for import rationing could be avoided by a "cyclical equalization policy" covering temporary deficits in the balance of payments by temporary shifts of international currency reserves or international credits, as indicated before. But a basic requirement for the smooth working of the international reserve mechanism would not be satisfied, and the need for exchange rationing or short-term exchange adjustments would not easily be averted, unless the different countries and particularly the major industrial states were reasonably successful in maintaining a steady level of good domestic employment without widely divergent national price movements.

The initial object of exchange control in most cases was to stop an outflow of capital. In later years, many countries after having adjusted their exchange rates and relaxed their control of commercial payments still retained exchange control as an actual or potential check on capital exports. An overvalued currency such as the German could have been maintained, as the French was, by quotas and other import restrictions. But this would have left capital free to move out. In Germany, from 1934 on, exchange control for commercial purposes merged, in fact, into a system of direct state regulation of trade. Exchange control properly speaking was continued essentially as a means of preventing the outflow of funds, foreign or domestic. In general terms, therefore, the specific or unique contribution which exchange control has to offer is not as a form of trade regulation but as a means of controlling the flow of capital funds.

Thus exchange control in the 'thirties constituted, in the last analysis, a measure to check the disequilibrating capital movements which, as pointed out in Chapter V, caused so much trouble during those years and even earlier in the inter-war period.¹ If the mass of liquid money created before and especially during the present war remains in being and if, with memories of past currency disturbances still fresh, people remain highly sensitive to political and economic fears and disturbances, the problem of "hot money" may persist and exchange control may be required to deal with it.

Withdrawals of foreign credits from debtor countries are apt to occur at a time when foreign credits are most needed.² In the great depression such withdrawals occurred on a very large scale, and when

¹ It will be recalled that capital movements may generally be termed "disequilibrating" when they proceed from a country with high to a country with low interest rates, or from a country with a deficit to one with a surplus in the balance of normal international payments.

² In south-eastern Europe there was a gibe about foreign credit being like an umbrella which a man is allowed to keep till the moment it starts raining, when he must return it to the lender at once.

they exhausted or threatened to exhaust the foreign currency reserves of the debtor countries, transfer moratoria and standstill arrangements were adopted to arrest or to regulate them. A better method would probably have been to replace the private credits as and when withdrawn, by official credits granted, for instance, by one central bank to another or by way of an international fund. Some use was in fact made of this method in the great depression.

Flight of domestic funds, however, was the type of capital movement for which exchange control was mainly intended.

In its reply to an inquiry conducted by the Economic and Financial Committees of the League of Nations early in 1938, the Austrian Government suggested that the abolition of exchange control "would be facilitated if several countries were to undertake it simultaneously, and if the risks of the transition period could be guarded against by means of an international equalization fund."¹ This suggestion points to an alternative to exchange control, namely, an international equalization fund which could offset abnormal movements of private balances. But an international fund of this type may be required for a more vital purpose—for the purpose of covering discrepancies on account of trade, services and productive investment. If, in addition to trade and other normal transactions, such a fund had to cover all kinds of capital flight, it might have to be endowed with enormous resources. In fact, no fund of any practicable size might be sufficient to offset mass movements of nervous flight capital. And there may be other objections to the use of this method for this particular purpose. While the United States, for instance, may be quite prepared to hold, temporarily at any rate, foreign balances resulting from an increase in exports, it may be questioned whether the United States Treasury would be willing to hold, directly or indirectly, large amounts of, say, Austrian schillings merely to enable Austrian citizens to hold United States dollars.

In the 'thirties exchange control as a means of curbing abnormal capital movements was applied "unilaterally," applied, that is, by the particular country or countries from which funds were moving out or threatening to move out. But certain devices mentioned in the first section, devices which in those years were used only on a very minor scale, suggest that control might be more effective and at the same time less stringent and burdensome if countries gave help to each other. This help might take two forms: (1) exchange of information concerning private balances held abroad; and (2) control by capital-receiving countries designed to check abnormal imports of funds for non-productive purposes.

The latter may imply an extension of exchange control to all countries, though the desired effect might perhaps be achieved by taxation and other measures in capital-receiving countries.

¹ League of Nations, *Report on Exchange Control*, p. 45.

Exchange of information, on the other hand, may not necessitate exchange control proper in the receiving countries. It may, however, raise other problems, such as that of bank secrecy.¹ Generally speaking, the conduct of monetary policy may be very difficult if governments do not possess full information concerning their citizens' foreign assets and liabilities. Even before the war, therefore, there was a strong trend towards increasingly comprehensive collection of such data by monetary authorities. While for domestic operations the rule of secrecy may be left intact, a bank's dealings with foreign residents would have to be reported in all the detail necessary to maintain control of capital movements through exchange of information and to enforce, in case of need, the sale of private foreign balances to the authorities. Even so, special regulations might be required in order to close loopholes in the form, for instance, of nominee holdings. The purchase of foreign bank notes is a form of capital movement which may be particularly difficult to supervise under such a system. Holdings of bank notes or, for that matter, bearer securities are in the nature of things "anonymous." While dealings in securities usually pass through specialized channels accessible to control, bank-note transfers may be more difficult to detect and to report. One measure to impede such transfers might be to stop the issue of new bank notes of large denominations and to withdraw the old ones from circulation.

But one need not contemplate the future as if—apart from commercial credits and long-term investments—all international movements of private funds would have to be severely restricted or prevented altogether. What may have to be prevented are the massive one-way movements, usually self-aggravating in character, which serve no useful social function and which may wreck any orderly system of international monetary relations. In ordinary circumstances cross-movements of liquid funds may take place without giving rise to a heavy balance in one direction. For a variety of motives, some of which may even be speculative, citizens of country A may wish to hold balances in B's currency while B's citizens may wish to hold some money in A. Provided the authorities have full knowledge of such movements, there may be no reason to interfere with them. For individual transactions the authorities may fix a general exemption limit. But even if the control is complete in the sense that all transactions have to be licenced, reported or centralized, the actual administration of control need not prevent transfers of private cash balances, so long as there is no violent one-way movement threatening a country's international currency reserve.

¹ Under the Franco-Swedish agreement, mentioned in Section 1, the Swedish Finance Ministry undertook to forward to the French Finance Ministry detailed information, including "any particulars which the competent Swedish authorities may obtain from banks, savings banks or other similar institutions concerning assets in the possession of individuals domiciled in France" (*cf.* League of Nations, *Treaty Series*, Volume CLXXXIV, No. 4241, Article 18).

CHAPTER VIII

THE STRUCTURAL ENVIRONMENT

I. IMPORTANCE OF NON-MONETARY CONDITIONS

THE preceding chapters have repeatedly touched upon non-monetary factors that have shaped the course of monetary developments. There has been occasion to consider, for example, the unequal distribution of wealth among the nations; the effects of fluctuations in industrial activity and employment; the special problems of agricultural states; the impact of political aspirations and disturbances. It seems advisable, before concluding, to give a more coherent, though necessarily incomplete, account of some of the underlying conditions affecting the operation of international currency systems.

Monetary mechanisms do not exist for their own sake. They are instruments, intended to facilitate the production and exchange of real goods and services. They inevitably reflect and conform with the economy which they are called upon to serve.

In any consideration of international monetary policy, therefore, account must always be taken of changes in the economic, social and political environment. The appropriateness of monetary techniques developed under earlier and different conditions must always be freshly tested and appraised. Failure to do this was responsible for much of the friction and disappointment experienced in international monetary relations during the inter-war period. The restoration of the gold standard in the 'twenties was an attempt to rely upon an international currency mechanism inherited from the past without meeting the prerequisites for its successful operation under changed conditions. The implications of the changes that had taken place in the environment in which the restored gold standard was to function were inadequately realized, partly perhaps because there had not been time enough to gain a balanced perspective of the economic and financial heritage of the war; and no one, of course, could have foreseen the direction in which economic conditions would change after the war. But there was also an excessive faith in the power of the gold standard mechanism to eliminate deep-seated strains, transfer problems and structural maladjustments. Indeed the apparent success with which the pre-war monetary façade seemed to have been reestablished tended to blind the world to the existence of basic shifts and stresses in the structural framework.¹

The failure to subject the old monetary mechanisms inherited from the nineteenth century to a searching reappraisal after the first world

¹ Cf. William Adams Brown, Jr., *The International Gold Standard Reinterpreted, 1914-1934*, especially Chapter 21.

war may in part be explained by the dominance over men's minds of an oversimplified and somewhat idealized view of the international currency system existing before 1914. This view was embodied in certain canons of orthodoxy and "soundness." It is characteristic of such canons that they tend to assume an independent existence of their own. It is essential for a currency mechanism, however, to adapt itself continually to economic change.

The eagerness with which the orthodox forms were restored was partly no doubt a reaction to the inflationary disturbances of the early post-war years. The hyperinflation that occurred in certain parts of Europe left profound psychological effects, not only in the countries directly concerned but elsewhere as well. Even the more rigid and restrictive aspects of orthodoxy may have seemed attractive in those circumstances. The desire of many countries to restore their pre-war gold parities was part of this reaction. Later, the violent deflation of the early 'thirties was to produce a contrary reaction in many countries in favour of devaluation and credit expansion, though in Europe the psychological effects of post-war inflation remained a powerful factor inhibiting the readjustment of exchange rates.

Underlying the short-run variations of monetary ideology there was throughout the inter-war period a persistent trend towards national monetary management in the interest of internal economic stability. Whatever the forms, the substance of international currency policy was increasingly made to conform to domestic, social and economic policy, and not the other way round. Yet countries were still economically interdependent and international exchange stability was still a desirable objective. What the world was groping for was the maximum degree of international stability consistent with freedom to pursue autonomous national policies to moderate the violence of economic fluctuations.

The growing desire for social security and economic stability was certainly a major change in the general environment. It was by no means the only one.

For example, the world's industrial activity, which throughout most of the 19th century was very largely concentrated in England, had become more and more decentralized. Scientific knowledge, manufacturing techniques and mechanical skills had spread to many parts of the globe, while foreign trade and investment had helped to provide the necessary capital goods. This diffusion of industrial power was marked by a similar shift in the financial sphere. After the first world war there was no longer any single dominant financial centre, such as London had been before.

This development, though accelerated by the war, had been a gradual one. The war, in addition, created shifts of unprecedented magnitude in the structure of international debt. Germany, a creditor country with a net import surplus, became a debtor nation as a result

of reparations and the loss of her foreign assets. The United States, at the same time, was transformed from a debtor country into a great creditor nation as a result of war loans, private investments and debt repatriation during the war.

Another example of structural change was the severe restriction of international migration after the war. It has often been pointed out that interregional fixity of exchange rates within a country is feasible largely because of the freedom of migration; in the event of a shift in demand people can avoid unemployment in one region by moving to a more prosperous one. On the international plane this safety-valve was shut off at the very time when a system intended to secure a permanent fixity of exchange rates was re-established.

Indeed, the gold standard system was established over a wider area than before. On that account, as well as on account of the industrial and financial decentralization to which reference has just been made, the system was in a sense more truly international than before. That it came to be adopted in an environment of intense and growing nationalism was one of the basic inconsistencies that led to its breakdown.

2. PROBLEMS OF AGRICULTURAL COUNTRIES

The importance of structural conditions is particularly obvious in the case of agricultural countries.

Agricultural production being closely dependent on local peculiarities of soil and climate, the export trade of such countries is, or used to be, concentrated to a high degree on one or only a few staple products. Without much exaggeration agricultural countries could often be characterized as "one-crop countries." Thus in 1929 the percentage share of the principal commodities in total exports was: in the Argentine, 47% (wheat and maize); in Australia, 41% (wool); in Brazil, 71% (coffee); in Cuba, 75% (sugar); in Egypt, 80% (cotton); in Greece, 57% (tobacco). The monetary position of any country so highly dependent on one or two export products is liable to be affected by any change in the output or price of the particular product or products in question.

Agricultural output is generally rather inelastic in relation to price changes, but subject to erratic fluctuations due to the weather. Demand is also generally inelastic with regard to price and at the same time, for raw materials in particular, liable to cyclical shifts because of variations in income, working stocks and speculative inventories in the industrial consuming countries. These conditions of supply and demand in combination have tended to produce severe fluctuations in the export prices, balance of payments and national income of agricultural states. The tendency of capital imports to increase in times of high and to stop in times of low export prices has often intensified these fluctuations. From the mechanism of "equilibrating" short-term

capital movements that played a prominent part in the relations between the more developed countries before 1914, agricultural countries generally derived little assistance since they were not equipped with short-term money markets at home.

While in the industrial countries depression manifests itself chiefly in unemployment and reduced production, agricultural countries experience depression mainly through a fall in export prices, producers' incomes and capacity to import. It is true that certain areas of peasant farming in eastern and south-eastern Europe, parts of Asia, etc., have suffered from a form of unemployment known as "disguised unemployment"; but that has been a chronic rather than a cyclical phenomenon. These areas could have produced the same output with a much smaller labour force, but lack of capital for domestic industry combined with lack of emigration opportunities has tended to keep the surplus population on the land at bare subsistence levels. On the other hand, areas of relatively recent settlement such as the Argentine, Australia and Canada, with a more abundant supply of capital and natural resources in relation to the labour force, have made great advances in the technique of agricultural production. Moreover, the war of 1914-18 stimulated an increase in production outside Europe, while subsequently the normal inelasticity of demand was aggravated by agrarian protectionism in certain industrial states. The persistent depression of the primary producers' terms of trade resulting from these conditions in recent times has been repeatedly aggravated by the cyclical fluctuations already mentioned.

Owing to the peculiar instability in their balance of international payments, agricultural countries occupied a special position even in the nineteenth-century gold standard system. That system was far from universal: most of the primary producing countries never adhered to it or only adhered to it intermittently. In fact, as was noted in Chapter V (Section 6), exchange depreciation has been a normal reaction of such countries to any sharp fall in their export prices. It is only gradually that the progress of wealth and monetary management has made it practicable for some of these countries to keep sufficient gold and foreign exchange reserves to meet the fluctuations in external receipts and to prevent, if not the resultant fluctuations in domestic income, at any rate the violent changes in the domestic money supply which the maintenance of exchange stability would otherwise entail (*cf.* Chapter IV). The establishment during the 'thirties of central banks in such countries as the Argentine, Canada, India, New Zealand and Venezuela, no doubt reflected a desire for national monetary management in this direction. The Argentine Central Bank Law of 1935 expressly stated that the bank's object was "to concentrate sufficient reserves to moderate the consequences of fluctuations in exports and investments of foreign capital, on currency, credit and commercial activity, in order to maintain the value of the currency." The policy

of neutralization pursued by the Argentine in 1936-38, described in Chapter IV (Section 2), attained this object with a large measure of success.

But, as already indicated, a policy of monetary neutralization alone cannot eliminate the direct effects of export price fluctuations on producers' incomes at home. Some countries have sought to alleviate these effects by paying export subsidies in the slump and, much less frequently, by levying corresponding taxes on exports during the boom. This may indeed steady the prices received by producers, but it is bound to intensify the price fluctuations on the world market; and since it means stimulating exports when their prices are low and discouraging them when their prices are high, it must tend to reduce the country's export earnings on the average. To avoid these undesirable results, export products, if storable, would have to be withheld from the market during the slump and released during the boom. Attempts on the part of producing countries to follow such a course have usually failed, either because of inadequate monetary reserves or because of a natural tendency to aim at too high a level of average export prices. For these reasons it would have been necessary for the industrial consuming countries or for the consuming and producing countries jointly to operate international buffer stocks of primary products in order to narrow the range of short-term price fluctuations. So long as demand in the great industrial countries remains subject to wide cyclical shifts some such arrangement seems essential for the attainment of greater stability in both the domestic economy and the external currency relations of primary producing states.

Faced in fact with a highly variable demand, these states have tended to make certain structural adjustments in their economy. In the first place, they have sought to lessen their dependence on a narrow range of export products by diversifying their agricultural output and hence the composition of their exports. Accordingly, the share of the chief traditional export products in the total exports of such countries as the Argentine, Australia, Brazil, Bulgaria, Greece and Turkey has shown a marked decline.¹ Industrialization has been another and more fundamental adjustment by which agricultural states have reacted to the instability of their balance of payments, though in part it must also be regarded as a reaction to the chronic depression of agricultural prices compared with the prices of manufactured goods.

It may be that such structural changes will tend to make it easier for the countries concerned to adhere to a system of stable exchange rates. But obviously these adjustments have a long way to go before they can be expected to eliminate the special problems just considered. There is no doubt that the economic welfare of many of the less developed countries will long remain dependent to a high degree on

¹ See *Review of World Trade, 1937* (League of Nations), p. 73.

the export of crude foodstuffs and raw materials; and some method of steadying the demand for and the prices of such goods is likely to remain an essential prerequisite for the inclusion of these countries in any system of stable monetary relations.

3. THE SPREAD OF INDUSTRIALIZATION

To an extent not always realized today, the international economic organization of the nineteenth century was centered on and directed from England. The international gold standard was in effect a sterling standard. London was the commercial and financial heart of the whole system.

This was an exceptional state of affairs in international monetary history; and it was based on exceptional economic conditions. It was England that gave birth to the industrial revolution. Endowed with rich mineral resources and favourably situated for transport by sea, England became the world's industrial workshop, and retained a virtual monopoly of mechanical manufacture and skill until the third quarter of the nineteenth century. From that time on, industrial activity began to develop rapidly in other parts of the globe, notably in north-western Continental Europe and in North America. During the thirty or forty years before 1914, manufacturing production in Germany, Belgium, France, the United States and many other countries showed a considerably higher rate of growth than in Great Britain. Yet owing to her early start, Great Britain remained the centre of gravity in the world economy.

But the process of diffusion continued, and was accelerated by the war of 1914-18. It has been said that "the changes in the industrial productive technique and power in the United States, Japan, Canada, and Australia and in other countries during the war were such as might otherwise have required a quarter of a century."¹ The United States emerged as by far the greatest industrial power. In the Far East, Japan established herself as a new centre of manufacture. Even countries that remained predominantly agricultural set up and developed manufacturing industries at a rapid pace. Such statistics as are available indicate that in India, Brazil, South Africa, New Zealand and Finland, for example, as well as in Japan, industrial production increased from 1913 to the later 'twenties by 100% or more—a rate of advance which, among the more developed countries, was not attained even by the United States. Great Britain's competitive position was affected not only by the rise of domestic industries in many of her export markets, but also by a shift of demand from cotton manufactures to artificial silk and from coal to petroleum and hydro-electric power.

During the 'thirties, industrial activity in the United States went

¹ William Adams Brown, Jr., *op. cit.*, p. 137.

through a period of relative stagnation, while in a large number of formerly backward countries industrialization proceeded with a vigour that was only temporarily checked, if at all, by the great depression. The most remarkable development was the enormous expansion in the Soviet Union's productive capacity, especially in heavy industries. In 1938 the League of Nations' index of industrial production for the world as a whole was 11.5% above the level of 1929. According to the available national indices the following twelve countries exceeded that level by 33% or more:

Increase in Industrial Production, 1929-1938

U.S.S.R.	313%	Estonia	46%
Japan	75%	Sweden	46%
Latvia	75%	Chile	37%
Greece	65%	Denmark	36%
Finland	56%	New Zealand	35%
Eire	49%	Roumania	33%

Such indices are lacking for a number of countries, including the Argentine, Brazil, India and Australia, where considerable expansion is known to have occurred during this period. It should be remembered, however, that in spite of a relatively high rate of industrial growth most of these countries still remained predominantly agricultural in character.

Unlike Great Britain in the early nineteenth century, the countries where industrialization is a relatively recent development have had the advantage of importing capital equipment from more advanced industrial regions either in immediate exchange for their crude products or by way of loans. Accordingly, the proportion of capital goods in total exports of the older industrial countries has steadily increased. The distinction between capital and consumption goods is not an easy one to make in statistical practice. An attempt has, however, been made thus to segregate the exports of the United Kingdom, Germany and the United States over a period of nearly fifty years (1880-1929). The result—a remarkable rise in the share of capital goods—is shown below:¹

The series ends in 1929. We may further make a comparison between 1929 and 1938, confining it to such goods as are most obviously in the nature of capital equipment—namely, machinery, vehicles, metals and metal manufactures. We find that the share of these goods in the total exports of the United Kingdom, Germany and the United States rose from 33% in 1929 to 43% in 1938. The quantum of total

¹ Cf. B. Ohlin in *International Economic Reconstruction* (Joint Committee, Carnegie Endowment, International Chamber of Commerce, 1936, p. 32) and A. H. Hansen in *International Economic Relations* (Commission of Inquiry into National Policy in International Economic Relations, 1934, p. 105).

*Composition of Exports from the United Kingdom,
Germany and the United States*

	1880	1900	1913	1929
Capital goods	26%	39%	46%	55%
Consumption goods	74%	61%	54%	45%
	<hr/> 100%	<hr/> 100%	<hr/> 100%	<hr/> 100%

exports from the three countries was lower in 1938 than in 1929; but since the share of capital goods was so much higher, the quantum of such goods exported was certainly not less in 1938 than in 1929.

This result is subject to reservations.¹ But it is none the less remarkable. In 1938, as in the preceding years, foreign lending was practically non-existent. In 1929, foreign lending, though reduced, was still considerable, and much of the trade in capital goods in that year no doubt reflected expenditure of loans contracted in the preceding year or years. Evidently the industrial development outside the established centres of manufacture in the later 'thirties was financed by internal savings; and the demand for capital equipment was maintained in spite of the absence of foreign lending.

A few examples of the rising proportion of capital goods in total imports of agricultural countries are given below:²

*Percentage Share of Machinery, Vehicles, Metals
and Metal Manufactures in Total Imports*

	1929	1938		1929	1938
Brazil	33%	40% ^a	New Zealand	32%	40%
Bulgaria	32%	49%	Peru	31%	37%
Finland	24%	36%	Poland	22%	37%

^a 1937.

It may be too early as yet to appraise the full consequences of the spread of industrialization; but clearly the process is bound to affect the monetary as well as the trading relations between different parts of the world. Monetary systems are instruments serving to facilitate the production and exchange of goods; and if production and exchange become decentralized, the currency mechanism may have to conform to this tendency. The highly centralized gold standard system before 1914 was in harmony with a highly centralized system of world trade and industry. "Before the war the international gold standard was in effect a sterling exchange standard. The existence of

¹ First, the classes of goods selected include motor-cars and other durable consumers' goods. Secondly, the 1938 figures undoubtedly include an increased trade in armaments. Thirdly, changes in classification in the trade returns may have affected to some extent the comparison between the two dates.

² The reservations stated in the last footnote apply here as well.

a separately definable sterling area after the war is a measure of the degree to which this generalization was no longer true."¹ The rise of separate currency groups in the inter-war period may have been fostered by historical ties, political and military objectives, common traits of mass psychology in certain countries, etc. But at bottom it was probably connected also with the fact that there now existed not one but several centres of industrial power, with lesser countries clustered around them. Thus the year 1935 saw the world divided into five more or less distinct currency groups: (1) the sterling area, comprising in the main the British Commonwealth and Northern Europe; (2) the dollar area—a less definite group, yet one that comprised a large number of countries, especially in Central and South America, whose currencies were linked in effect to the currency of the United States; (3) the exchange-control area of Central and South-Eastern Europe, in which Germany played the leading part; (4) the yen area, which, though practically confined to Japan's possessions and military conquests, yet constituted a not insignificant factor in the Far East; and (5) the gold bloc of Western Europe, held together chiefly by a common resistance to devaluation, and soon afterwards dissolved. Countries such as Canada and the Argentine, whose commercial and financial ties did not fit them naturally into any single bloc, had to maintain an intermediate and sometimes far from comfortable position in this system of group exchanges.

The United States, the greatest single industrial nation, suffered a relative lag in her domestic economy during the 'thirties, which may partly account for the disintegration of the international currency system at that time. The subsequent expansion of her industrial production (by over 100% from 1935-39 to 1943) and the immunity of her equipment from military destruction may greatly strengthen her industrial ascendancy and make her the natural centre of economic and monetary relations in the future. The only other alternative to the group-exchange system is, of course, a comprehensive international organization acting as a central agency to guide and coordinate the economic and monetary intercourse between nations.

A further possible implication of the spread of industrial activity remains to be mentioned. "The international trade of the nineteenth century, in particular that of Great Britain with the rest of the world, was in the main complementary. Its outstanding characteristic was the exchange of manufactured goods of industrialized regions for raw materials from elsewhere."² From the last quarter of the 19th century onwards, the rise of new industrial countries such as Germany and the United States tended to increase the importance of triangular trade. But, taking the industrialized areas as a whole, the "bilateral" exchange of manufactured products for the crude products of agricul-

¹ William Adams Brown, Jr., *op. cit.*, p. 784.

² William Adams Brown, Jr., *op. cit.*, p. 133.

tural and mining countries remained a basic element of foreign commerce; and this was true to a large extent even for industrial countries individually. As late as 1929, more than 70% of world trade was bilateral in the sense of imports and exports offsetting each other between individual pairs of countries. It was on the basis of an exchange of manufactured goods for crude foodstuffs and raw materials that Germany built up her bilateral clearing system with South-Eastern Europe. The tendency towards industrialization in primary producing countries, while weakening the simple bilateral trade relationship between these and the more advanced industrial countries, must increase the need for multilateral exchange and for a corresponding monetary medium of settlement.

It is sometimes supposed that industrialization tends to reduce the total volume of trade and hence the need for an international means of settlement. Recent experience shows, however, that manufacturing countries are usually each others' best customers. If industrialization leads to an increase in the real national income of relatively undeveloped countries, the demand for imports on the part of such countries is likely not to fall, but to expand. Whether industrialization does, in fact, increase the national income per head is not, of course, by any means certain; some of it has been misdirected in the past, or has been inspired by non-economic aims. Yet we should remember that in the condition of "disguised unemployment" which has plagued certain densely settled peasant areas, almost any new industry which, in default of emigration, helps to absorb the rural surplus population is likely to add to national output and purchasing power. Moreover, as income in the older industrial countries rises and a diminishing proportion of it is spent on staple foodstuffs, a relative shift of resources from agriculture into industry is a wholly natural consequence tending in general to maintain, if not to increase, the level of real income in the primary producing states.

4. DEPRESSION AND PROSPERITY

The impact of cyclical fluctuations on international monetary relations is a subject we have touched upon so frequently in the earlier chapters that only a brief mention of it is needed in the present context.

Recent experience has made it abundantly clear that the cyclical instability to which economic life is subject under the system of individual capitalistic enterprise has been a crucial factor tending to impede the successful operation of international currency mechanisms. Society has become more sensitive to this instability. The interest of all countries in avoiding depression is a common interest. But no method of prevention or control has yet been evolved except in the form of independent national action—action that has sometimes been aimed, not at stimulating total demand, but at shifting the burden of

depression to other countries. International monetary relations have been profoundly affected both by "beggar-my-neighbour" policies of this type and by policies seeking to protect the domestic economy of an individual country from the impact of fluctuations originating abroad. Indeed, the international currency system itself, in addition to its traditional function of facilitating the exchange of goods and services, has been made to serve a new function: that of providing each country with some form of buffer against external fluctuations. Autarky might be an easy way of keeping out external fluctuations; but for most countries it would mean an unbearable reduction in living standards. The buffer mechanism must be so devised that it does not interfere, or interferes as little as possible, with the exchange of goods and services, which is the prime object of any international currency system. This requirement is met by a regime under which reserves of recognized means of international settlement are used as shock-absorbers by individual countries. It is not met by continual exchange variations, let alone exchange controls designed to cut down trade.¹

The factors making for fluctuations in economic activity have tended to grow in strength.² As the standard of living rises and simpler wants are satisfied, an increasing proportion of consumers' demand is directed towards luxury or semi-luxury goods. Some of these are durable: automobiles, refrigerators, radio sets, etc. Whether durable or not, they are often subject to capricious changes of fashion. Others consist of services, such as entertainments or travel. The essential feature of this type of demand is that it is less steady and dependable than the demand for basic articles of food, clothing and shelter; the automobile can be made to last another year, the holiday cruise can be put off when times are bad. Thus the postponable nature of a growing part of consumers' demand is liable to intensify any depression that once sets in.

The decline in population growth in some of the advanced industrial countries means a decrease in the proportion of children, which further accentuates the reduction in the demand for the more basic articles of consumption relatively to the demand for durable and luxury goods and services. In the nineteenth century, the rapid expansion of population appears to have assisted the maintenance of

¹ In short, there are two purposes for which a country may want to resort to exchange variations or exchange controls: (1) to forestall a passive balance of payments resulting from depression abroad; (2) to secure an active balance of payments in order to mitigate a depression arising at home. In the former case, exchange depreciation means an adjustment of the actual rate towards a new (lower) equilibrium level. In the latter case exchange depreciation means moving the rate away from the equilibrium level, and must be classed as a "beggar-my-neighbour" policy. The former is a type of "buffer policy," and much less objectionable; yet it is undesirable (especially in the case of purely temporary disequilibria) because of the harmful effects of exchange variations on international trade (*cf.* Chapter V).

² *Cf.* A. Loveday, "Problems of Economic Insecurity," in *The World's Economic Future* (Sir Halley Stewart Lectures 1937).

employment in a number of ways. The continuous increase in the number of families provided a steady demand for new homes and household articles. Conditions were favourable for other types of investment related to the rate of population growth, such as schools and public utilities. The labour force was younger on the average, and hence more mobile and adaptable. The decline in the rate of growth or even in the absolute size of the population which now confronts a number of industrial countries affects employment and economic stability in the opposite way. Certain types of investment opportunities that could be counted upon regularly in the past, now tend to diminish; the working population is older and less adaptable, while changing demands involve more frequently shifts of workers and frictional unemployment instead of merely different rates of expansion in different occupations.

The effect of the increasing instability of consumers' demand is reinforced by the greater importance of capital goods in total output. A growing proportion of national income is "saved" and devoted to enlarging the stock of capital instruments. It is mainly this process of capital formation that makes countries richer and renders labour more productive by providing it with more and better equipment. But at the same time the process is highly variable. Investment expenditure depends on fluctuating profit prospects; it is postponable. There is an inherent instability in the relationship between consumption and investment. A steady rate of capital formation presupposes in general a certain rate of *increase* in consumers' demand for the final products. When that rate of increase slackens, investment activity tends to decline. When consumers' demand stops increasing, investment may actually fall to zero. The result is unemployment in the capital goods industries, leading to a fall in consumers' spending and a cumulative spread of depression.

The industrialization of countries hitherto predominantly agricultural has probably tended to increase instability in the older industrial countries. The new countries have generally concentrated at first on simpler manufactures (clothing, food, paper, etc.) while the older ones have had to change over from the export of these products to capital goods, for which demand is much less stable.

The structural tendencies to instability, combined with the greater desire for economic security as part of a rising standard of living, have been largely responsible for the steady growth of State intervention in economic affairs. The business cycle does not appear in centrally planned economies; it is an affliction peculiar to the capitalistic economy of free private enterprise. Practically all countries adhering to the system of private enterprise have tended to evolve, generally in a haphazard and tentative fashion, a growing complex of government controls with which to counteract fluctuations in private business activity or mitigate their effects: budgetary policies, banking regula-

tions, taxes, subsidies, licensing systems, housing programmes, public works, relief and social insurance schemes, etc. Thus there are powerful instruments of anti-cyclical policy now at the command of many governments, but they need to be applied with a consistency of method and clarity of purpose which still remain to be developed.

The problem of cyclical fluctuations is an international one. The first requirement of policy on the international plane is that any country suffering depression at home should abstain from seeking to cure it by such "beggar-my-neighbour" devices as import restrictions or depreciation of exchange rates below the equilibrium level. But that is a merely negative requirement. The positive requirements imply, above all, a common acceptance by the different countries of the same objective—namely, economic stability at a high level of employment—and a continuous coordination of the national measures designed to achieve it. "The really acid test of international economic cooperation runs in terms of deliberate international policy with respect to the control and moderation of depressions."¹

In practice, the weight of individual countries in this regard is very unequal. A special responsibility clearly rests upon the major industrial and trading nations. During the inter-war period the United States, in particular, was a frequent source of violent economic fluctuations. "It may be asserted with confidence that this country (the United States) could make no greater contribution to the solution of the international political as well as economic problems than that of achieving a high degree of internal economic stability at a level of fairly full employment of labour and other resources."²

5. INTERNATIONAL INVESTMENT

In the world such as we find it, foreign long-term lending is another essential prerequisite for the successful operation of a stable international currency system.

In previous chapters it was remarked that, so long as business activity in the advanced industrial private-enterprise economies remains subject to fluctuations, a recurrent or chronic tendency towards depression in any of these countries is liable to create a persistent discrepancy in the international balance of payments and thus to drain away the external currency reserves of other countries. A steady flow of foreign investment by the country suffering from such a tendency is a proper means not only to cover the discrepancy and to prevent a dislocation of the international reserve system but also to stimulate production and employment in that country itself.

Even more fundamental is the importance of foreign investment as a means of lessening the inequality in productive equipment and,

¹ Alvin H. Hansen, *Fiscal Policy and Business Cycles* (1941), p. 450.

² Alvin H. Hansen, *op. cit.*, p. 450.

hence, standards of living in different parts of the world. We have seen that any international reserve arrangement must face the difficulty that the poorer countries are not likely to want to hold adequate buffer reserves unless the requirements of their economic development are provided for in other ways.¹

The gaps between the levels of livelihood in the richest and the poorest countries are enormous; and with the growing development of communications, the world has become increasingly conscious of them. Great masses of population in economically backward regions still live in a state of extreme want and squalor. But the case for international investment as it concerns us here does not rest on humanitarian grounds. It rests on the elementary economic ground that, especially in default of migration, a more even distribution of capital equipment in relation to labour and natural resources tends to benefit the real income and productivity, not only of the backward areas, but of the most advanced countries as well.

The unequal supply of capital is reflected in the wide differences between investment yields obtainable in different areas. During the nineteen-thirties, foreign lending practically ceased, not because the differences had disappeared or diminished, but because they were outweighed by the risk of loss to individual investors due to political and economic disturbances, and because governments in some cases deliberately restricted the granting of loans to foreigners. In part, no doubt, the collapse of foreign lending in the 'thirties was also a consequence of faulty methods of lending employed formerly and more especially in the preceding decade.

The United States was by far the largest lender in the 'twenties. A recent report of the U.S. Department of Commerce has characterized the main defects of foreign lending in that period as follows: "(1) There was, far too frequently, an extremely poor choice of investment risks, reflecting both the absence of any official policy and the abuse and mismanagement of the capital market by inexperienced and unscrupulous investment houses temporarily attracted by opportunities for abnormal profits; (2) largely as a result, the outflow of American capital behaved in an erratic fashion, rising to a peak in the first half of 1928 and falling sharply thereafter."²

The variability of foreign lending has tended in the past to aggravate particularly the fluctuations in the balance of payments of primary producing countries. Capital has usually been attracted to these countries at times when their export prices were rising. A decline in the prices of export products and a consequent worsening of internal conditions has usually led to a sharp decline or complete stoppage of long-term capital imports. The inflow of funds has been liable to

¹ Cf. Chapter I. Section 4; Chapter IV, Section 3.

² U.S. Department of Commerce: *The United States in the World Economy* (Economic Series No. 23, 1943), p. 19.

change suddenly into a net outflow because of the contractual obligation to maintain not only the interest service but also the amortization of the outstanding debt. Only too often default has been the result of this rigidity of loan contracts in the face of wide fluctuations of national income, demand and employment in the industrial creditor states.

It is obvious, in general, that any country which is using its own labour and productive equipment far below capacity can have no real need for either capital imports or other financial payments from abroad. The attempt, for instance, to transfer reparations to a country suffering from general domestic unemployment is liable both to aggravate that unemployment and to dislocate the international currency mechanism. The reluctance to accept payment in goods is natural in such circumstances. The case is similar with interest and amortization payments when the creditor country suffers from depression and unemployment at home. No doubt many of the loans granted during the years 1925-28 did not, or did not immediately, increase the productivity of the borrowing countries; there was certainly inadequate control of the use made of foreign loan proceeds. But even the soundest and most productive investments may result in losses and defaults if demand collapses in the great industrial creditor countries.

A growing proportion of capital movements in the 'twenties took the form of "direct investments"—establishment of branch factories abroad, participation in foreign companies, etc. These investments, involving no fixed interest and amortization payments, seem to have weathered the subsequent depression comparatively well, though even they came to a standstill in the 'thirties, at any rate so far as the United States is concerned.

However, the greater part of foreign investment in the 'twenties was still in the form of bonds, issued mostly by governments or government agencies of the borrowing countries. Indeed, the equity form of investment is not easily applicable to a great many objects for which foreign capital may be required in the relatively undeveloped countries. Among these objects may be: roads, bridges, harbours and other transport facilities; irrigation works, flood control and drainage systems to improve the efficiency of agriculture; and other kinds of basic public-utility schemes designed to raise the country's productivity. In many cases investments of this type must necessarily be undertaken by governments or government agencies and financed by foreign loans contracted, or at least guaranteed, by governments. It may well be that in the most backward countries the most fundamental need is for investment in the health, education and technical skill of the population; and for these purposes also, foreign loans may have to be taken up by governments. A certain measure of flexibility in the

interest and amortization service of all such loans is essential to meet the risks of depression.

Past experience also suggests the desirability of reducing the risk to individual investors in the lending countries through pooling arrangements, joint guarantees, etc., either by individual governments of creditor nations or by an international institution. If approved foreign loans were guaranteed by governments in the lending countries, they could be issued at interest rates comparable to those on domestic government bonds. A risk premium charged to the borrowing countries could then provide a reserve against default on any particular loan or suspension of the loan service in cases of emergency.

The wide fluctuations in the flow of foreign investment were a serious defect in the past. This may have been inevitable under a system in which loans were floated by various investment houses as and when sufficiently attractive investment schemes were submitted by various individual borrowers. A steady flow of capital would seem to require a measure of centralized organization and control in both lending and borrowing countries. In the latter this may involve mapping out the broad lines of national development plans in advance and setting up special agencies to guide the expenditure of foreign loans in accordance with those plans. Examples of such machinery are provided by the National Development Companies established in various Central and South American republics, financed in part by the United States Export-Import Bank as well as by domestic government and banking sources.

No doubt there may continue to exist formidable obstacles, political as well as economic, to the development of backward areas by means of international investment. The risk of political upheavals abroad may continue to impede the export of capital from the wealthier countries, while in the poorer ones a growing nationalism and dislike of foreign control may dampen the desire for capital imports. In any event it should not be overlooked that maintenance of active demand and employment in the advanced industrial states would alone be a valuable contribution to the development of economically backward countries as it would tend to provide them with stable and favourable markets for their products and thereby keep up their national income, their capacity to save and their power to purchase capital equipment from abroad.¹

¹ The quantitative importance of stable foreign demand, compared with the flow of capital, may be illustrated by the following example. From 1928 to 1932 the export prices of the Argentine fell on the average by 40% while import prices declined by only 3%. If export prices had declined by the same percentage as import prices, the export proceeds realized would have exceeded the actual proceeds realized in 1932 by an amount approximately equal to the Argentine's total net capital imports during the three years 1926-28.

6. COMMERCIAL POLICY

There is a close relationship between commercial policy and monetary policy. From the standpoint of the balance of payments, changes in trade barriers can sometimes be an alternative to adjustments of exchange rates.

Thus, the overvaluation of the British pound in the years 1925-31 might have been mitigated if other countries had agreed to reduce their tariffs; but the campaign waged to this end proved unsuccessful.

The growth of quantitative trade restrictions in France and other European gold-standard countries from 1931 may partly be interpreted as a reaction to exchange fluctuations elsewhere. One country's tariff can generally be surmounted if the other country's currency depreciates to a sufficient degree; in the case of the British pound, incidentally, that degree was at first largely determined by France herself through the withdrawal of short-term balances from London. Import quotas are a more absolute barrier. Besides, they can generally be varied by administrative action, just as foreign exchange rates can be, once the gold parity has been abandoned; while changes in the tariff usually require legislation.

As more and more currencies were lowered in gold value, the gold-bloc and other European currencies adhering to the old parities became severely overvalued; exports from the countries concerned suffered in consequence from a special and serious handicap; and the reduction in imports necessary for balancing the external accounts was effected by quotas, exchange restrictions, licenses, prohibitions, etc., as well as by tariffs, though tariffs in fact became less and less important with the rise of the new methods of trade regulation.

Thus, as a result largely of persistent disequilibria in the structure of exchange rates, the use of commercial policy during the inter-war period came to be far extended from the "protection" of certain individual industries to the "protection" of a country's balance of international payments. It is clear that, with inappropriate exchange rates maintained persistently above the equilibrium level, restriction of imports becomes inevitable; any reserve of international liquidity available for settling the balance-of-payments deficit in such circumstances must tend to become exhausted.

Apart from structural maladjustments in exchange rates, commercial policy was influenced to a great extent also by attempts to use it in a general manner as a form of national anti-depression policy. Just as exchange variations may be employed for this purpose in two ways, so a distinction between two types of policy may be made here.

(1) A country may want to adopt import restrictions in order to prevent a worsening of its trade balance resulting from a depression abroad and so to counteract the spread of that depression to its own domestic economy. Commercial policy in this case may be termed a

"buffer policy." To keep away the depressive tendencies emanating chiefly from the United States may thus, in part at least, have been the function of the import restrictions introduced or increased in many countries in the early 'thirties and again, though to a lesser extent, in 1937/38.¹

(2) A country suffering a depression in its own employment and investment activity at home may want to mitigate that depression by means of import restrictions, which may well improve the situation by increasing the flow of national expenditure on domestic as against foreign products, creating new investment opportunities in domestic production and, under a gold standard regime, expanding the domestic money supply, thanks to the improvement of the trade balance and the resulting inflow of the monetary metal. The improvement for that country, however, means necessarily a deterioration for others. This type of policy has therefore been aptly described as a "beggar-my-neighbour" policy. Yet under gold standard conditions and in the absence of domestic recovery measures, it used to be practically the only anti-depression policy available to an individual country. We may recall that the United States increased its tariff levels sharply in 1922 and 1930, following in both cases a serious recession in domestic activity.

But in these general uses of commercial policy there is little or nothing that could not be achieved through alterations in exchange rates, though such alterations may not in certain conditions produce the desired effect and, at least for short-term purposes, should generally be avoided by the settlement of balances through transfers of international currency reserves. The particular characteristic of commercial policy as against exchange-rate policy is that it is selective and discriminatory. Commercial policy has always involved discrimination by commodities. In some of its recent forms it has involved also discrimination by countries.

Discrimination of the first kind has been inspired by a great variety of aims—favouring special groups of producers, protecting domestic monopoly positions, securing a breathing space for "infant industries" to develop, stimulating production in branches important for military purposes, diversifying the employment structure for social reasons, etc. Exchange depreciation, though it may help, may not meet the case, for example, of the agricultural country wishing to develop its own industries: the foreign capital goods and materials required for this purpose would increase in price along with the manufactured articles that are to be produced at home. Import restrictions are intended to ensure, in effect, that the country's export earnings shall be spent according to a certain priority schedule. Given the existing inequalities of income distribution, considerations of priority have

¹ Cf. *The United States in the World Economy* (U.S. Department of Commerce, 1943), pp. 13 and 199.

very often been applied so as to prevent the export earnings being "wasted" on luxury imports and to give preference, for instance, to imports of prime necessities for mass consumption. Less often has it been realized, however, that in a situation of full employment this requires a corresponding control over domestic resources to prevent them being "wasted" on the production of luxury goods formerly imported.

The conditions determining the international division of labour at any given time are continually subject to change, and countries through their commercial policy may seek to change those conditions deliberately for the reasons indicated. But it is an inescapable fact—a fact too obvious to need elaborate emphasis here—that anything tending permanently to restrict and distort the international division of labour must lower the efficiency of economic effort and the standard of material welfare in all the countries concerned. While some of the social priority considerations inherent in commercial policy may have to be accepted as a datum, international monetary policy can contribute a great deal towards a liberalization of economic intercourse by lessening the need for what we have called the general uses of commercial policy in relation to the balance of payments: more especially, by providing for orderly adjustments of exchange rates in cases of persistent structural disequilibria and by furnishing an adequate supply of international cash reserves to act as a buffer for temporary discrepancies in the international accounts. In the last resort, however, it is domestic anti-depression policy—particularly in the advanced industrial nations—that is likely to remain of decisive importance in shaping the course of commercial policy. It is only under conditions of active home demand and full domestic employment that countries can be expected to welcome imports and to regard their exports, not as a means of providing employment, but as an inevitable cost of the foreign goods desired.

The discrimination by countries which has been so conspicuous a feature of commercial policy since 1931, especially in the form of bilateral clearing arrangements and import quotas, has been due to three principal factors:

(1) The breakdown of the international monetary system, resulting in large disparities in exchange rates and depletion of the external currency reserves of certain countries (*cf.* Chapter VII);

(2) The desire to stimulate home employment through exports, by using import quotas and other restrictions as a bargaining weapon to force exports on particular countries the trade with which showed normally an import surplus;

(3) Designs of national aggrandisement and ascendancy over weaker states.

Enough has been said on the first two points. The third became

increasingly important in commercial policy during the five or six years that led to the outbreak of war in 1939. Economic considerations were increasingly subordinated to political ends. Commercial policy became increasingly a form of economic warfare. A great power in search of more "living-space" found it advantageous to deal with each of the smaller nations within its reach on a strictly bilateral basis and so to influence their whole economic life in accordance with its own aims. "National economic and political power *necessarily inheres* not only in the magnitude of a country's international trade but also in the division of a country's exports and imports among its trading partners."¹ That power, it was found, could be effectively exercised through state regulation of trade along lines of bilateral discrimination.

A sound organization of international monetary relations may withstand political shocks and disturbances of many kinds. Means can be devised, for instance, to deal with capital flights arising from fear of war. A drive for national self-sufficiency in essential commodities need not be incompatible with multilateral currency and trading methods for what trade there remains to transact. Even under a regime of direct state trading between nations some medium of settlement commanding general acceptance and hence capable of serving as a store of liquidity to each individual state may still remain a necessity or at any rate a convenience. But it is impossible for a truly international currency system to function under conditions of economic warfare and aggressive bilateral bartering such as developed in the 'thirties.

¹ Howard S. Ellis, in *Post-War Economic Problems* (ed. Seymour E. Harris, 1943), p. 355.

CHAPTER IX

REVIEW AND CONCLUSION

I. THE NEED FOR STABLE EXCHANGES

THE twenty years between the wars have furnished ample evidence concerning the question of fluctuating *versus* stable exchanges. A system of completely free and flexible exchange rates is conceivable and may have certain attractions in theory; and it might seem that in practice nothing would be easier than to leave international payments and receipts to adjust themselves through uncontrolled exchange variations in response to the play of demand and supply. Yet nothing would be more at variance with the lessons of the past.

Freely fluctuating exchanges involve three serious disadvantages.¹ In the first place, they create an element of risk which tends to discourage international trade. The risk may be covered by "hedging" operations where a forward exchange market exists; but such insurance, if obtainable at all, is obtainable only at a price and therefore generally adds to the cost of trading. The relative expansion of trade in the sterling group during the 'thirties, though largely due to other circumstances, may be attributed in part to the fact that this group formed a wide area of mutually fixed exchange rates and that trade between the member countries was not hampered by the risk of exchange fluctuations.²

Secondly, as a means of adjusting the balance of payments, exchange fluctuations involve constant shifts of labour and other resources between production for the home market and production for export. Such shifts may be costly and disturbing; they tend to create frictional unemployment, and are obviously wasteful if the exchange-market conditions that call for them are temporary. The resources would have to be shifted back again once a temporary disequilibrium has been removed.

Thirdly, experience has shown that fluctuating exchanges cannot always be relied upon to promote adjustment. Any considerable or continuous movement of the exchange rate is liable to generate anticipations of a further movement in the same direction, thus giving rise to speculative capital transfers of a disequilibrating kind tending greatly to accentuate any change that may be required for the balancing of normal transactions. Moreover, the normal transactions also may come to be affected by speculative anticipations: a fall in the exchange value of a country's currency may lead to a rise in imports and a decline in exports if traders at home expect the prices of

¹ Chapter V, Section 7.

² Chapter III, Section 2.

foreign goods to be still higher in the future and if foreign buyers hold off in anticipation of still lower prices as a result of an expected further decline in the exchange. Self-aggravating movements of this kind, instead of promoting adjustment in the balance of payments, are apt to intensify any initial disequilibrium and to produce what may be termed "explosive" conditions of instability. We have observed such forces at work in several cases of freely variable exchanges; we may recall in particular the example of the French franc during the years 1924-26.¹

As a result of the proved disadvantages of freely fluctuating exchanges, the system has been far from popular. Countries have seldom displayed any eagerness to adopt it by deliberate choice. During the 'thirties, exchange rates changed frequently. But *freely* fluctuating exchanges were by no means common. The changes were either controlled or, after brief intervals of uncontrolled fluctuation, were followed by measures of stabilization at a new level.²

Stability of exchange rates has proved essential not only for international economic intercourse but for domestic stability as well. But this does not mean that exchange rates must be kept permanently fixed at all costs. It is extremely difficult to ascertain and establish the correct equilibrium rates of exchange when economic relations are resumed after a global war; and so the structure of initial exchange rates that emerged in piecemeal and haphazard fashion during the 'twenties contained elements of strain—notably an overvalued pound and an undervalued franc—which could have been removed by appropriate adjustments with advantage to all.³ When that structure broke up in the early 'thirties, new disparities arose through the reluctance of certain countries—Germany and France in particular—to make adjustments that would have removed or lessened the need for exchange controls, import quotas and other restrictions, which were required to maintain the currencies in question far above their economic level and which presented so formidable a hindrance to the revival of international trade.

While exchange variations are certainly an unsuitable and undesirable means of dealing with short-term discrepancies in the balance of payments, an absolute rigidity of exchange rates in the face of drastic changes in other factors at home or abroad may thus be equally harmful. The general interest may call for an occasional revision of currency values so as to eliminate as far as possible any chronic and structural disparity between price levels and exchange

¹ Chapter V, Section 3.

² "After cutting loose from the gold standard, what every country has done—save for the exchange control countries . . . —has been, in one degree or another and in one way or another, to tie back on again. . . . There is no evidence of any desire for a really flexible currency." J. H. Williams, "International Monetary Organization and Policy," in *Lessons of Monetary Experience* (ed. A. D. Gayer, 1937), p. 33.

³ Chapter V, Section 2.

rates in different countries. We shall see later what can be learned from inter-war experience about the conditions under which changes in exchange rates may be a proper remedy for international monetary disequilibria.

2. INTERNATIONAL CURRENCY RESERVES: THEIR FUNCTION, FORMS AND DISTRIBUTION

A system in which rates of exchange are kept stable over considerable periods requires some form of international liquidity, some medium with which countries can settle temporary gaps in their balance of payments. Indeed, the maintenance of exchange stability itself, except under exchange control, involves sales and purchases of that medium by the national monetary authorities at a fixed price (or at prices permitting a limited range of variation), with the result that a country's international cash reserves decline when there is a deficit and increase when there is a surplus in the balance of payments.

Thus the function of such reserves is at once to keep the exchanges stable and to meet discrepancies between foreign payments and receipts. Discrepancies may arise for more or less fortuitous reasons: crop failures, labour conflicts (such as the British coal strike in 1926) or natural disasters (such as the Japanese earthquake in 1923). A store of international currency, whatever its form (gold, foreign balances or pre-arranged borrowing facilities), is capable of softening the impact of all such shocks; it enables an individual country for a time to purchase more goods from abroad than it is in a position to sell; hence it makes for greater stability not merely in the exchange rate but in the country's imports and real national income.

Apart from such "extraneous" factors as those just mentioned, differences between foreign payments and receipts are liable to arise from the fluctuations in productive activity and monetary demand which have been a marked feature of the modern industrial system of private enterprise and private profit. It is for this reason that international currency problems are so closely bound up with the problems of the business cycle.

If business fluctuations occurred in different countries at the same time and in the same degree, there might be no reason why they should affect the balance of international payments. In fact, however, their timing, strength and direction are likely to differ. Apart from such possible general influences as weather conditions, technical change or business psychology, there is no mechanism to make fluctuations coincide except the mechanism of the balance of payments. Divergent fluctuations in investment, money income and demand give rise to "gaps" in the balance of payments; and it is mainly through the balance of payments that booms and depressions are transmitted from one country to another and so tend to be "synchronized."

Synchronization of general business fluctuations was characteristic

of the traditional gold standard system. That system imposed no close restraints on simultaneous movements in the same direction. In the interests of exchange stability it required above all conformity on the part of its members. Conformity was achieved to some extent automatically through the unimpeded influence of foreign demand on a country's export earnings, domestic income flow and capital outlay;¹ all that was required for this purpose was that countries should not attempt to control their national income and outlay by deliberate measures—a requirement which in the age of *laissez-faire* was generally fulfilled. To reinforce this influence, there existed “rules of the game” which prescribed that changes in a country's gold reserve should be accompanied by multiple or at least parallel changes in the domestic credit supply, or at all events that nothing should be done to offset any automatic effect which gold movements might produce in that direction.²

In this way gold generally acted or was expected to act as a “conveyor” or “transmitter.” During the inter-war period, gold and other international reserves came instead to serve more and more as a “cushion” or “buffer.” There was evidently a growing reluctance on the part of individual countries to submit to economic fluctuations originating abroad; there was a growing desire for economic stability; there was a growing realization of the need to maintain national income and outlay so as to secure an adequate level of employment. As part of this general trend, the practice of neutralizing the effect of gold movements on the domestic credit base became increasingly common.³ This tended indeed to keep the domestic money supply more stable, but it was not by itself sufficient to offset the effects of a fall in foreign demand on a country's exports and hence on its domestic income, expenditure and employment. It is clear, however, that international currency reserves in their role as shock-absorbers are capable of serving this wider purpose as well. Thus at a time of general depression any single country seeking to expand effective demand and employment at home needs a buffer reserve of international means of settlement to meet the adverse balance likely to result from the increase in its national income as compared with income abroad. The buffer function of international cash reserves becomes even more evident in the case of a country which continues to maintain its national income at a high level when a depression occurs in some other country or countries. A reserve of international liquidity enables the country in question to meet the adverse balance likely to develop in these circumstances. Depression abroad means a fall in the demand for its exports. If employment at home is to be maintained, the decline in foreign expenditure on its export products needs to be offset by an increase in domestic expenditure. It may not of course be possible

¹ Chapter IV, Section 5.

² Chapter IV, Section 1.

³ Chapter IV, Section 2.

to avert a local depression in the export industries (unless their output is storable and is actually purchased for storage in commodity buffer stocks—a policy which has been advocated for the crude staple products of agricultural and mining countries);¹ but the compensatory increase in home expenditure would at any rate prevent the cumulative contraction of the home market which would otherwise tend to result from the reduced expenditure of people deprived of their normal income or employment in the export industries.²

In short, this type of policy seeks to combat the spread of depression by offsetting the effect of a fall in foreign demand on home employment through a rise in domestic demand, accepting the consequent gap in the balance of payments and settling it by an outward transfer of liquid international reserves. This gap, incidentally, arises from the fall in exports; if domestic expenditure is increased just sufficiently to compensate for the fall in exports, total national income will remain constant, and so there is no general reason to suppose that the gap will be widened through a rise in imports in these circumstances. In the next section we shall have to note an alternative line of action for preventing the entry of depression from abroad, which aims in effect at closing the gap itself by measures such as exchange control or exchange-rate adjustments.

Needless to say, any offsetting policy relying on international currency reserves as a buffer presupposes a large volume of such reserves for each single country as well as in the aggregate. With a policy confined to offsetting the effects of gold movements on the national credit base and money supply, the automatic forces tending to close the gap may continue to operate through the direct and indirect influence of changes in foreign demand on the domestic income flow.³ But with a policy of regulating domestic demand so as to offset fluctuations in foreign demand and to keep up a stable level of employment at home, such automatic forces are largely eliminated, and the amount of reserves to be surrendered to other countries may therefore be very considerable. Obviously the method is suitable only for temporary discrepancies; and it is only temporary discrepancies that we are discussing in this section. In the circumstances considered, there may indeed be factors tending to make the discrepancies temporary. If "depression abroad" is a cyclical phenomenon, it is likely to pass sooner or later; or, since depression is not a pleasant state, the countries affected may sooner or later do something to cure it. Moreover, a compensatory national-income policy, by keeping up the demand for imports, tends *ipso facto* to sustain employment in the depressed countries abroad and may help them to achieve recovery more quickly.

In the same way, compensatory changes in domestic expenditure may be necessary to keep out inflationary influences originating

¹ Chapter VIII, Section 2.

² Chapter IV, Sections 5 and 6.

³ Chapter IV, Section 5.

abroad. If a country enjoys a satisfactory level of employment to start with, a substantial increase in foreign demand for its products would tend to create an inflationary rise in prices unless domestic expenditure is reduced so as to keep total demand reasonably stable.¹ The surplus in the balance of payments would be settled by an inflow of international cash. This inflow would thus be accompanied by a reduction in domestic expenditure just as in the previous case the outflow would be accompanied by an increase in domestic expenditure. In either case, "offsetting"—not merely with regard to the money supply but, as just indicated, in the wider sphere of effective demand—appears as an essential element in the use of international currency reserves as "shock-absorbers."

The frequency with which in practice gold movements were "neutralized" during the inter-war period² suggests indeed that such, in essence, was the system for which the world was groping, even though in point of doctrine homage was still paid at times to the orthodox "rules of the game" aiming at precisely the opposite policy of reinforcing the effects of gold movements on the flow of domestic demand. With the existing objectives of economic stability and adequate employment, it is scarcely possible any longer to expect one country to allow a cumulative depression to develop in its domestic market simply because a depression has developed in one of its foreign markets. The international reserve system provides a certain margin or leeway for individual countries seeking to maintain stability of domestic conditions while yet enjoying the advantages of stable exchanges. The extent of this margin depends on the volume of reserves available for international settlements.

During the period reviewed, the volume of reserves available would have been larger had it not been for the legal stipulations requiring central banks to hold a certain minimum "cover" of gold or foreign exchange reserves against their notes in circulation or their notes and sight deposits combined. The effect of this system was virtually to prevent a large amount of reserves from being used as international means of settlement.³ In 1929, for example, the amount tied up as "cover" was more than half of the total gold and exchange reserves of central monetary authorities in the world as a whole. The legal reserve requirements were chiefly intended to set a limit to monetary expansion by any single bank of issue. However, the opinion was becoming widely held that if any such legal limit on domestic credit expansion were desired it could and should be set independently, without being related to the country's international currency reserve.⁴ The principle of cover requirements, though not generally abandoned in law, undoubtedly lost some of its prestige during the 'thirties. In

¹ For a concrete illustration, see Chapter III, Section 2 (pp. 53-54).

² Chapter IV, Section 2.

³ Chapter I, Section 2.

⁴ Chapter IV, Section 4.

general, countries did not regulate their domestic money supply, let alone their national income, in such a manner as to make it run parallel to changes in their international reserves. Indeed it is obvious that the buffer function of international reserves implies opposite rather than parallel changes in a country's national income and international liquidity; a country in which effective demand increases in comparison with the rest of the world is likely to lose some of its reserves, while a country in which it declines is likely to increase its reserves.

The principal form of international currency during the period reviewed was gold. Gold had previously been in wide use as coin for hand-to-hand circulation, but now was mostly concentrated in central reserves and employed as a token for settling differences between international payments and receipts. The supply of that token relatively to the world's need for it was largely determined by the conventional or legal rate at which it was valued in terms of the national currencies and indirectly therefore in terms of the goods and services exchanged between nations. By varying this rate of valuation the amount of international reserves furnished by a given quantity of gold could be varied at will, without necessarily affecting the prices of goods other than gold or the rates of exchange between currencies. This fact was brought out forcibly in the early 'thirties when an almost universal change in the price of gold in national currencies increased the value of the world's pre-existing gold stocks by some 70% on the average. Regulation of the total supply of gold as a means of international settlement thus appears conceivable without any new production of the metal; and the use of gold already in existence involves no further cost to the world (except the cost of handling and storage). In fact, of course, gold mining continued, and was rendered much more remunerative by the higher price, so that in addition to the rise in the value of existing stocks there was an enormous increase in the volume of productive resources devoted to gold mining and in the amount of new gold forthcoming.¹

The period opened, however, in circumstances which gave rise to fears of a shortage of gold resulting from the post-war restoration of currencies. Accordingly the gold exchange standard was widely advocated and adopted during the 'twenties as a means of averting the deflationary effects of such a shortage.² To the extent that this system was actually practised, countries adhering to it refrained from taking gold in settlement of any surpluses accruing to them, and were content to accept balances in such centres as New York or London, knowing that other countries (besides, of course, those centres themselves) would also accept settlement in such balances. Though there was no formal arrangement to that effect, New York and London, owing to their financial and commercial importance, were naturally

¹ Chapter I, Section 3; Chapter V, Section 5.

² Chapter II.

the two chief centres in which such balances were held. Thus dollar and sterling reserves contributed largely to international liquidity.

In a system of this sort the policy pursued by the centre country is of vital importance. Throughout the area in which its own currency is freely accepted as a means of international settlement, the centre country need have no anxiety about its own international liquidity. But if it fails to keep up domestic business and an active demand for imports so as to enable the member countries to secure the desired amount of reserve balances, the liquidity of the member countries may be seriously impaired. The decline of economic activity in the United States in 1929-32, which was far more severe than in the rest of the world, tended to deplete the member countries' dollar reserves and so contributed to the breakdown of the gold exchange standard. Another weakness of the system was that a large part of the members' reserve balances in the 'twenties had come into existence through short-term loans from the centre countries. When, as in 1931, these loans were suddenly withdrawn, the debtor countries' exchange reserves were to a large extent wiped out. Thus the deflation which had been feared in the early 'twenties turned out to be not averted but merely delayed.

The gold exchange standard suffered from the coexistence of at least two centres. Shifts of reserves from one centre to another gave rise to gold movements, and the liquidity of each centre was therefore liable to strains. Moreover, member countries could convert their reserves into gold at any moment. So long as they remained on the gold exchange standard there was no need for them to do so. But in fact the allegiance of some members was uncertain and reluctant. The system as a whole was compromised by the special difficulties due to the undervaluation of the French franc, the repatriation of private French funds and the desire of the French authorities to return to a fully metallic standard.

The sterling exchange system of the 'thirties was free from some of these defects and proved a far more successful experiment.¹ One reason for its success was undoubtedly the fact that in the United Kingdom the depression was relatively mild and that recovery began early and was steadily sustained. This shows again that the supply of international currency in an exchange-reserve system must largely depend on economic activity in the centre country.

In the sterling area, member countries acquired their reserves chiefly through the active market which the centre country provided for their exports. Loans from the centre played a much smaller part than under the gold exchange standard. There is, of course, no general objection to acquiring reserve balances by loans, so long as these loans are not subject to withdrawal at short notice; the reserves provide a service for which it is worth while paying interest, since they enable a

¹ Chapter III.

country to meet temporary gaps in its balance of payments without suffering the disturbance of exchange fluctuations. But the reserves created under the gold exchange standard through private short-term credits granted by the centre countries afforded no real addition to the member countries' international liquidity in view of the risk of those credits being withdrawn at any moment.

A conceivable variant of the exchange-reserve method would be a procedure under which international liquidity would be supplied in the form of pre-arranged borrowing facilities. A country would make use of these facilities only as and when it actually needed to settle a deficit in its foreign accounts and would pay interest, if at all, only on the amount thus actually used.¹

Another conceivable variant would be some arrangement by which each country could, as and when it needed them, purchase foreign currencies up to a certain limit from an international fund by paying an equivalent amount of its own currency to that fund.²

Gold, the principal form of international currency, came to be very unevenly distributed during the inter-war period and still more unevenly after 1939.³ If maldistribution has rendered one form of international currency unserviceable for most countries, another form may have to be adopted through some variant of the exchange-reserve system.

But, if the underlying conditions giving rise to the maldistribution of international currency persist, the question remains whether the new form will not after a while become equally unserviceable. In earlier chapters the basic conditions governing the need, the desire and the ability of different countries to hold international cash reserves have been considered at length.⁴ We may recall that one of the difficulties in regard to the distribution of currency reserves tends to arise from the unequal distribution of wealth among the nations. Countries that are relatively poor may be reluctant to maintain reserves adequate to offset their balance-of-payments fluctuations and thereby to secure a greater measure of stability, unless their more essential needs are met by other means. If they have urgent material needs to be met by imports from abroad and if they cannot obtain enough of such imports otherwise, they naturally tend to use up their currency reserves and thus sacrifice the requirements of stability to those of immediate advance in material equipment or consumption.

Similar considerations apply to countries impoverished or devastated by war. A country denuded of its physical working stocks is not likely to leave its international currency reserve untouched if it

¹ Cf. *Proposals by British Experts for an International Clearing Union* (1943).

² Cf. *Preliminary Draft Outline of Proposal by United States Experts for a United and Associated Nations Stabilization Fund*; and *Tentative Draft Proposals of Canadian Experts for an International Exchange Union* (1943).

³ Appendix IV, Table 2.

⁴ Chapter I, Section 4; Chapter IV, Section 3.

has no other means of replenishing those stocks. Besides, if currency reserves were the only means, a reserve that would be adequate for "buffer" purposes in normal times is likely to be far from adequate in relation to the exceptional import requirements of a country in this situation. Any attempt to redistribute the world's gold supply by way of loans is unlikely to succeed in such circumstances: the gold is likely to be spent and to return to its former owners. It was the acute and exceptional need for imports that contributed largely to the depreciation of many European currencies in the early 'twenties.¹ The currency stabilization loans granted to impoverished European states later in the 'twenties were in part expended on imports serving to increase or restore not only capital equipment but also immediate consumption. Experience has shown that credit facilities granted for the general purpose of currency stabilization may in fact prove an unsuitable and wasteful method of capital supply or relief.

For the sake of the international currency system alone, therefore, a fundamental importance attaches to the organization of international investment by methods ensuring the maximum long-run benefit to the borrowing countries and to the world as a whole.² Only if an adequate volume of international development and reconstruction loans is forthcoming can one expect poor and impoverished countries to maintain sufficient liquid reserves as a buffer against fluctuations in their balance of payments.

Among the wealthier and more advanced countries in particular, the distribution of international cash reserves may come to be distorted by speculative capital movements (which will be dealt with in the next section) or by a lack of "synchronization" in regard to economic fluctuations. If lack of synchronization implies merely that all countries are subject to booms and depressions but at different times, then there is no reason to expect a chronic and increasing maldistribution of currency reserves. The international reserve mechanism should be able to cope with all short-term differences in the international accounts, including differences of a "cyclical" nature. But if the volume of reserves is inadequate, even short-term differences may exhaust the reserves of some country or countries. More especially, if one member of the system succeeds in maintaining a stable level of income and employment while another suffers from periodic depressions, the result must be that, with an exchange rate such that when both are in a state of full employment their balance of payments is in equilibrium, the former country will experience a cumulative loss and the latter a cumulative gain of international liquidity. One obvious remedy would be an increased rate of foreign investment by the latter country. Failing this, the situation may call for the means of adjustment next to be considered.

¹ Chapter V, Section 1.

² Chapter VIII, Section 5.

3. EXCHANGE CONTROL AND EXCHANGE ADJUSTMENTS

A system of generally stable rates of exchange requires a "buffer stock" of liquid resources enabling each country to settle any temporary deficits in its foreign transactions. If the buffer reserves are too small in the aggregate or too unevenly distributed, countries will inevitably be forced to resort to trade restrictions or exchange fluctuations to deal with purely short-term disequilibria.

But no amount of international currency may be sufficient if in addition to discrepancies in current transactions (or current transactions and normal investment loans combined) it has to meet those disequilibrating short-term capital movements which caused so much trouble during the 'thirties. Funds in search of safety rather than employment often moved from countries with high to countries with low rates of interest or from countries with a deficit to countries with a surplus in the balance of payments, thus aggravating any discrepancies already existing. This was true not only of "flight capital" or "hot money" but sometimes also of panic withdrawals of foreign short-term credits.

Such movements were due sometimes to political or economic fears, sometimes to speculative motives. Chief among the last was the desire to avoid a loss or secure a gain from actual or anticipated changes in exchange rates. Whenever confidence in the maintenance of the existing exchange rates is lacking, such speculative motives are bound to make their influence felt.¹

Whatever the motives, the means necessary for buying foreign currency were provided by liquid domestic funds already in existence or by the elasticity generally inherent to some extent in the banking and credit system; in a number of countries liquidity was greatly increased by easy-money policies during and after the great depression. Since it would have been extremely disturbing to allow speculative capital transfers to cause violent spasms of deflation and inflation, the authorities usually took care to offset the effect on the domestic credit base of the accompanying changes in central gold and exchange reserves. But the maintenance of domestic liquidity in a country suffering from capital flight meant that funds available for further purchases of foreign currencies were constantly replenished so that the process was liable to continue unchecked till the complete exhaustion of a country's gold and exchange reserves.

In the absence of international reserves large enough to meet such speculative and often self-perpetuating capital movements many countries had resort to exchange control and to other less insidious means of correcting the balance of payments.

Capital-receiving countries might conceivably have put enough of their currency at the disposal of the capital-losing countries to make

¹ Chapter V, Section 7.

the transfer possible. But this would have meant that the monetary authorities in the United States, for instance, would have had to hold large amounts of, say, Austrian schillings merely to enable Austrian citizens to hold United States dollars. Exchange-standard arrangements of this type could scarcely have been applied to a situation in which the fear of war was one of the potent causes of capital migration. When there are reasons to believe that the causes of disequilibrating short-term capital movements are not likely to remain operative for long, such arrangements might be and indeed have been applied, but it is more important that they should be available for the purposes of covering discrepancies on trade account.¹

In many countries in Europe mass psychology was highly sensitive to currency devaluation owing to the erroneous belief that it would give rise to a recurrence of the inflation which had caused so much recent suffering. In these circumstances it was extremely difficult for the monetary authorities to avoid the imposition of exchange control. But the ultimate effect of this control was to replace the price system in international trade by discriminatory barter, to prevent the weaker countries from buying in the cheapest markets and to render them peons of their more powerful trading partners.

It is true that, with an appropriate exchange rate, exchange rationing might be confined to capital exports alone; the goods and services exported at that exchange rate would yield enough foreign currency to pay for the goods and services imported, and there would therefore be no need to ration exchange for current transactions—no need, that is, to reject applications for foreign exchange for commodity imports, services and other normal transactions. But though this is theoretically true and has in some cases been true even in practice, exchange control differs from other means for influencing the balance of payments inasmuch as it enables the governments exercising it to prevent arbitrarily the purchase of any goods from any country of origin without prior notice or subsequent declaration. It threatens therefore the whole international trading system, and there can be no recourse against abuse, as the abuse is secret.

In the 'thirties exchange control was used not simply to prevent an exodus of domestic capital but also to prevent foreign capitalists from withdrawing money lent when their loans expired. This naturally put an effective stop to all international capital transactions which might well have been resumed, had preference been given to exchange depreciation over exchange control.²

It would be unrealistic to assume that similar dangers both to trade and credit transactions will not present themselves again whenever exchange control is in force. These dangers may be mitigated by the adoption of other and less objectionable methods to curb undesirable

¹ Chapter VII, Section 5.

² Chapter VII, Section 1.

capital exports and to some extent by modifying the system of exchange control itself.

The prohibition of capital export except under license has, of course, no discriminatory influence on trade. But experience has shown that in practice such prohibitions cannot be enforced without some supervision of all trading and other foreign transactions; and it is here that the danger of abuse arises. The problem is clearly one of administrative enforcement of a principle and not of the principle itself. This enforcement might be facilitated if the recipient countries cooperated in stemming any inflow of "hot money" by fiscal and other measures or if a detailed and systematic exchange of information concerning foreign holdings of monetary assets could be arranged among the various countries. The 'thirties furnished certain precedents for both of these methods though they were not adopted on any comprehensive scale.¹

But if, owing to anticipated exchange adjustments, political unrest or similar causes, closer control of hot money movements is inevitable, then some of its difficulties and dangers might be overcome again by international understanding. Were foreign owners of capital funds not subjected to the control and so able to continue lending, were agreements reached concerning the duration of the control or the rate of exchange to be applied when a change in the rate was contemplated, there would be less probability of the control being utilized as a weapon for commercial warfare.

Quite apart from capital movements, exchange controls have been used as an instrument for restricting trade when such restriction was felt to be required on account of a balance-of-payments deficit arising, for instance, from a severe depression in foreign markets or from some structural maladjustment in the economy of a country. The justification of trade restriction in the form of exchange control depends to some extent on whether the balance-of-payments deficit which it is desired to close by cutting down the allocation of foreign exchange for imports is due to temporary or permanent causes. A chronic or recurrent deficit must sooner or later exhaust a country's currency reserve. If exchange control is adopted to close the gap, the need for exchange rationing will persist as long as the underlying conditions are unchanged. But a chronic or persistently recurring deficit necessitating constant rationing of current exchange receipts is a clear sign of an inappropriate exchange rate. A downward adjustment of the rate would normally tend to restore the balance partly by stimulating exports and partly by reducing imports. Exchange control can enforce an even balance only by a much larger cut in imports. Compared with exchange adjustment, exchange control is plainly a harmful and obnoxious means of dealing with a situation of this kind.

¹ Chapter VII, Sections 1 and 5.

If there are grounds for believing, however, that a balance-of-payments deficit has arisen for manifestly temporary and exceptional reasons, a country whose currency reserve is not sufficient to tide it over the emergency may well prefer exchange control to exchange depreciation. These are, of course, the conditions for which foreign credit operations constitute the obvious solution, and resort to exchange control would represent a failure not only of the monetary mechanism but also of the capital market to function. Even if, however, exchange rationing is adopted under such conditions, there is no inherent reason why the discrimination involved in such rationing should operate along the lines of "bilateralism." In practice exchange rationing during the 'thirties did usually proceed on bilateral lines; yet experience has also furnished examples showing that exchange rationing is both conceivable and workable without discrimination of a bilateral character. Claims accruing to foreigners from approved current transactions can and should be made convertible into any other currency. For all a country needs in this situation is to keep its total international account in balance and not its accounts with each of its trading partners separately. Total imports can be cut down to any desired extent without interfering with the free convertibility of payments for such imports as are admitted.¹

In the past, exchange rationing has always been directed against *deficits* in the balance of payments, and has been applied by individual countries suffering from such deficits. But a great many countries may develop deficits simultaneously because of a large surplus accruing to one important trading nation. It is this surplus, and the conditions giving rise to it, that may constitute the real source of the trouble, rather than the corresponding deficit distributed over a large number of countries. Thus the enormous surplus which France acquired during the years 1927-30 was a serious source of strain for other countries.² The United States, owing largely to a relatively depressed state of economic activity at home, had a surplus on current account in all except three years during the 'thirties; other countries experienced in consequence a shortage of U.S. dollars; and the exchange controls, clearings, quotas and other trade restrictions adopted by them inevitably had the net effect of discriminating particularly against imports from the surplus country, the United States.³

It would be natural in such circumstances to apply exchange rationing, if at all, to the centre of the disturbance, instead of leaving a large number of individual deficit countries in an uncoordinated manner to adopt individual exchange-rationing measures of their own, which are likely to interfere unnecessarily with their mutual trade and payments. No such centralized rationing of a surplus country's cur-

¹ Chapter VII, Section 3.

² Chapter IV, Section 6.

³ Cf. *The United States in the World Economy* (U.S. Department of Commerce, 1943), pp. 13, 193, 199.

capital exports and to some extent by modifying the system of exchange control itself.

The prohibition of capital export except under license has, of course, no discriminatory influence on trade. But experience has shown that in practice such prohibitions cannot be enforced without some supervision of all trading and other foreign transactions; and it is here that the danger of abuse arises. The problem is clearly one of administrative enforcement of a principle and not of the principle itself. This enforcement might be facilitated if the recipient countries cooperated in stemming any inflow of "hot money" by fiscal and other measures or if a detailed and systematic exchange of information concerning foreign holdings of monetary assets could be arranged among the various countries. The 'thirties furnished certain precedents for both of these methods though they were not adopted on any comprehensive scale.¹

But if, owing to anticipated exchange adjustments, political unrest or similar causes, closer control of hot money movements is inevitable, then some of its difficulties and dangers might be overcome again by international understanding. Were foreign owners of capital funds not subjected to the control and so able to continue lending, were agreements reached concerning the duration of the control or the rate of exchange to be applied when a change in the rate was contemplated, there would be less probability of the control being utilized as a weapon for commercial warfare.

Quite apart from capital movements, exchange controls have been used as an instrument for restricting trade when such restriction was felt to be required on account of a balance-of-payments deficit arising, for instance, from a severe depression in foreign markets or from some structural maladjustment in the economy of a country. The justification of trade restriction in the form of exchange control depends to some extent on whether the balance-of-payments deficit which it is desired to close by cutting down the allocation of foreign exchange for imports is due to temporary or permanent causes. A chronic or recurrent deficit must sooner or later exhaust a country's currency reserve. If exchange control is adopted to close the gap, the need for exchange rationing will persist as long as the underlying conditions are unchanged. But a chronic or persistently recurring deficit necessitating constant rationing of current exchange receipts is a clear sign of an inappropriate exchange rate. A downward adjustment of the rate would normally tend to restore the balance partly by stimulating exports and partly by reducing imports. Exchange control can enforce an even balance only by a much larger cut in imports. Compared with exchange adjustment, exchange control is plainly a harmful and obnoxious means of dealing with a situation of this kind.

¹ Chapter VII, Sections 1 and 5.

If there are grounds for believing, however, that a balance-of-payments deficit has arisen for manifestly temporary and exceptional reasons, a country whose currency reserve is not sufficient to tide it over the emergency may well prefer exchange control to exchange depreciation. These are, of course, the conditions for which foreign credit operations constitute the obvious solution, and resort to exchange control would represent a failure not only of the monetary mechanism but also of the capital market to function. Even if, however, exchange rationing is adopted under such conditions, there is no inherent reason why the discrimination involved in such rationing should operate along the lines of "bilateralism." In practice exchange rationing during the 'thirties did usually proceed on bilateral lines; yet experience has also furnished examples showing that exchange rationing is both conceivable and workable without discrimination of a bilateral character. Claims accruing to foreigners from approved current transactions can and should be made convertible into any other currency. For all a country needs in this situation is to keep its total international account in balance and not its accounts with each of its trading partners separately. Total imports can be cut down to any desired extent without interfering with the free convertibility of payments for such imports as are admitted.¹

In the past, exchange rationing has always been directed against *deficits* in the balance of payments, and has been applied by individual countries suffering from such deficits. But a great many countries may develop deficits simultaneously because of a large surplus accruing to one important trading nation. It is this surplus, and the conditions giving rise to it, that may constitute the real source of the trouble, rather than the corresponding deficit distributed over a large number of countries. Thus the enormous surplus which France acquired during the years 1927-30 was a serious source of strain for other countries.² The United States, owing largely to a relatively depressed state of economic activity at home, had a surplus on current account in all except three years during the 'thirties; other countries experienced in consequence a shortage of U.S. dollars; and the exchange controls, clearings, quotas and other trade restrictions adopted by them inevitably had the net effect of discriminating particularly against imports from the surplus country, the United States.³

It would be natural in such circumstances to apply exchange rationing, if at all, to the centre of the disturbance, instead of leaving a large number of individual deficit countries in an uncoordinated manner to adopt individual exchange-rationing measures of their own, which are likely to interfere unnecessarily with their mutual trade and payments. No such centralized rationing of a surplus country's cur-

¹ Chapter VII, Section 3.

² Chapter IV, Section 6.

³ Cf. *The United States in the World Economy* (U.S. Department of Commerce, 1943), pp. 13, 193, 199.

rency was attempted during the period under review, though to some extent, as mentioned above, the measures of individual deficit countries had in fact this net result. It is of interest to note that the plans put forward by United States and Canadian experts in 1943 contain proposals to this effect in the form of an "Apportionment of scarce currencies" to be made under certain conditions by an international stabilization fund or exchange union.¹ A country's currency tends to become "scarce" for the rest of the world if—owing, for example, to insufficient domestic demand or insufficient foreign lending—that country develops a large surplus in its balance of payments. Rationing of the surplus country's scarce currency by an international agency might be a means for preventing the surplus country from draining away the liquid reserves of other countries and for preventing the spread of depression to other countries.² The prospect of such rationing might at times lead to anticipatory purchases of that currency, which would render that currency even scarcer. It is conceivable, however, that in these circumstances the surplus country would be prepared to make short-term loans to the international agency until it had resumed its long-term lending on a sufficient scale or succeeded in restoring its national income and imports. Here again exchange rationing, if it becomes necessary, need not and should not proceed on "bilateral" lines. It would be better to allot the scarce currency not in proportion to each country's exports to the surplus country, but, for example, in proportion to previous imports from the surplus country.

But exchange controls and other trade restrictions during the 'thirties, though serving partly as a buffer against depressive influences originating abroad, were in several important cases due to the need to "protect" currencies that were patently and seriously overvalued. The German mark and, before September 1936, the French franc were notable examples of overvaluation. The countries concerned inevitably suffered a decline in their competitive power to export; and if their external accounts were to be balanced, imports had to be cut down correspondingly, whether by quotas (as in France) or by exchange rationing (as in Germany). In the countries that protected

¹ Cf. U.S. Treasury Department, Preliminary Draft Outline of Proposal for a United and Associated Nations Stabilization Fund (Section V, paragraph 5); and Tentative Draft Proposals of Canadian Experts for an International Exchange Union (Section VI, paragraph 6). These provisions have since been embodied in the Joint Statement by Experts on the Establishment of an International Monetary Fund (April 1944), Section VI.

² Under this scheme, exports from the surplus country would be curtailed in order to eliminate the surplus. It may be noted that essentially the same result could be obtained if, in the circumstances under consideration, the surplus country were to lower its import barriers. This, however, the surplus country is not likely to do on its own initiative, and it alone has jurisdiction over its import barriers. The immediate effect of either policy would no doubt be deflationary in the surplus country, but since that country by definition tends to have a favourable balance of payments there is nothing to prevent it from counteracting this effect by domestic expansion.

their overvalued currencies by exchange control, the reduction in trade should be attributed to the inappropriate exchange rates rather than to exchange control as such.¹ This brings us to the question of exchange adjustments in cases of major structural disequilibria between exchange rates and national price-levels.

As observed in the first section of this chapter, such adjustments are not a suitable means for dealing with short-term strains. The more frequently exchange rates are altered, the closer will be the approach to a system of freely fluctuating exchanges with all its disadvantages including the risk of those disequilibrating reactions which are apt rather to increase than remove the strain. When a certain measure of depreciation, for example, comes to be interpreted as only a first step towards further depreciation, imports may rise and exports decline as a result of speculative anticipations. For this reason alone, changes in exchange rates are likely to be the more effective the less frequently they occur. Exchange stability should be the norm and exchange adjustment the exception.

The reason why the exception needs to be admitted lies in the rigidity of wages and prices. Under existing conditions it may be impracticable to keep exchange rates permanently fixed since it is difficult or impossible to secure the adjustment of domestic money incomes needed to close a persistent gap in the balance of payments.² A deficit country could close the gap by reducing total money income at home. Theoretically the reduction could be achieved by a concerted all-round cut of income-rates. In practice such a reduction, especially in a highly industrialized country, is liable to take the initial form of unemployment; and even if, as a result of this unemployment, it comes to be gradually "diluted" through wage-reductions, the adjustment is apt to be painful and slow. It is true that, for balance-of-payments equilibrium, what is required is a reduction in total money income, regardless of whether it comes about through unemployment or through wage cuts. But if a country's balance can be kept in equilibrium only through a contraction in domestic employment and activity, the position is not one of equilibrium in a more important sense. The true equilibrium rate of exchange is one that keeps the balance in equilibrium without the need for general unemployment at home. There was little sign of disequilibrium in the British balance of payments in the later 'twenties; yet the position was one in which gold

¹ Chapter VII, Sections 2 and 5.

² This applies primarily to downward adjustments in the case of deficits in the balance of payments. But the upward adjustment of incomes that would be necessary in the event of a persistent surplus may also encounter difficulties: for if a country's labour force is already fully employed, this would require a general inflation of incomes, costs and prices. Experience has shown (in the case of the United States, France and Sweden, for example) that in a highly organized industrial community there may be considerable resistance to such inflationary adjustment with all its attendant disturbances, social as well as economic, which are certainly not desirable in themselves.

losses could be avoided only through a depressed condition of national income and employment as compared with other countries; and so the pound was rightly regarded as overvalued.¹

So long as exchange adjustments are confined to the correction of a fundamental and persistent disequilibrium of this kind, they cannot be any more objectionable to other countries than wage-reductions or unemployment in the country suffering from an overvalued currency. On the contrary, exchange adjustment in such circumstances is likely to prove beneficial all round, since the country in question is enabled to restore not only its exports but also its imports along with its domestic income, production and employment, so that a balance is achieved at a higher level of trade.

In practice, apart from its inherent disadvantages, income deflation and unemployment as a means of adjusting the balance of payments is liable to encounter insuperable social resistances. In these circumstances the only remaining alternative to exchange adjustment in cases of chronic overvaluation is a policy of import restrictions. Here the interest of outside countries in a revision of exchange rates is equally plain; thus in 1935, for example, the outside world would have generally welcomed a certain measure of devaluation in France and Germany in preference to the alternative policies of deflation and import quotas in France and drastic exchange controls in Germany.

The danger of major disparities between exchange rates and price levels is particularly acute at the end of a global war during which wide divergences have developed between the price and income structures of different countries cut off from contact with one another.² In view of the difficulty of finding the best initial rates when economic relations are resumed, a process of trial and error might be necessary by which exchanges are readjusted from time to time by mutual agreement and consultation. What actually happened during the 'twenties was that one country after another established its gold parity by its own independent choice without much regard to the resulting interrelationship of currency values. Had the stabilization problem been attacked by concerted international action, there might have been a better chance of securing a set of workable exchange ratios from the start and less need for subsequent readjustments.

Throughout the inter-war period there was generally inadequate recognition of the fact that an exchange rate by definition concerns more currencies than one and is therefore by its very nature a matter for international agreement and consultation. Indeed, no country would ever be able to change its currency's exchange value if the others followed suit; any change is implicitly subject to the consent of the other parties. International monetary relations especially in the years before the Tripartite Agreement of 1936 suffered greatly from

¹ Chapter V, Section 4.

² Chapter V, Section 2.

the absence of an established machinery or procedure of consultation in the matter of exchange rates.¹

One of the main tasks of any international exchange-rate policy must be to prevent "exchange dumping." A single country may want to stimulate employment at home by depreciating its exchange below the equilibrium level, and may well obtain some relief in this way. But the improvement in its trade balance means a deterioration in the trade balance of other countries; and since depreciation by one country cannot be secured without the consent of others, the others in turn may depreciate and so restore the former position. The period under review demonstrates amply the futility of seeking competitive export advantages through exchange depreciation. In the great depression there were few if any countries that were able to gain any substantial or lasting relief from depression at home by means of "exchange dumping."² The important case of exchange dumping which arose from the undervaluation of the French franc in the years leading up to the depression came about by mistake rather than by deliberate design.

Just as exchange depreciation is unlikely to bring any lasting relief if other countries do not consent to it, so import restrictions are open to retaliation which may soon wipe out any initial gain. No doubt a country whose domestic activity for domestic reasons becomes depressed in comparison with the rest of the world may feel that it has a case for exchange depreciation or import restrictions as a way of relieving its depression. But that country is likely in the circumstances to acquire a favourable balance automatically, together with a gain in international liquidity, and so there is nothing to prevent it from combatting the depression by domestic expansion. It is the other countries that may have a real need for exchange depreciation or import restrictions as a way of preventing the spread of depression to them, if the drain on their liquid reserves becomes serious and persistent. Exchange depreciation or, as indicated earlier, exchange rationing against the currency of the depressed surplus country is a means of eliminating the gap in the international balance of payments and of preventing the spread of depression. In this case exchange adjustment or exchange control can be regarded as a "buffer" policy—a substitute for the buffer function of international liquidity and possibly a necessary substitute if the aggregate store of international currency is too small or too unevenly distributed. But here again it is doubtful whether anything can be achieved without tacit or explicit international agreement. If the depressed country, against whose export surplus the buffer policy of exchange depreciation or exchange rationing operates, refuses its consent, it can retaliate by measures of exchange depreciation or import restriction of its own.

In the preceding section (Section 2) we saw how the international

¹ Chapter V, Section 7.

² Chapter V, Section 4.

reserve system permits an individual country aiming at stable national income and employment to offset changes in the foreign demand for its products by inverse changes in domestic demand and to cover the accompanying gaps in the balance of payments by transfers of international currency reserves. Here it may be remarked that the method of import restriction or exchange adjustment, which in the absence of adequate reserves may on occasion become necessary, produces in an automatic manner similar compensatory changes in the flow of expenditure. Thus if a decline in foreign demand leads to a depletion of currency reserves and is consequently met by exchange depreciation, this has a twofold compensatory effect: it tends in the first place to divert domestic demand from imported to home-produced goods, leading possibly to increased capital outlay in home industries, and, secondly, to maintain exports by securing for them a greater share in the reduced foreign demand. If import restrictions are imposed in these circumstances, it is only the diversion of national expenditure from imported to home-produced goods that comes into play. In either case the automatic effects are such that they help to maintain total demand for the national output. But domestic expansion could achieve a similar effect on national expenditure and employment; the only specific function of the measures considered is to correct the balance of payments. The compensatory changes produced by these measures in the flow of expenditure are a useful but not essential by-product.

Similar considerations apply, *mutatis mutandis*, when a rise in foreign demand threatens a country with an inflationary price rise. An appreciation of the currency or a lowering of import restrictions would tend both to wipe out the surplus in the balance of payments and to divert expenditure away from that country's output. The appreciation of the Swedish krona in 1916-18 is one of the rare examples of such a policy.

In this way changes in exchange rates or in import barriers can be made to serve as a buffer against both deflationary and inflationary shocks entering from abroad. As such their function may be a legitimate one; what they primarily aim at is equilibrium in the balance of payments. They assume a quite different role when they are used to mitigate a fall in domestic demand by diverting a larger share of both domestic and foreign demand in favour of the national output. In that case they produce a surplus in the balance of payments and operate inevitably in an unneighbourly fashion at the expense of other countries.

The basic criterion by which exchange adjustments should be judged is whether they serve as a "buffer" or as a "beggar-my-neighbour" policy. In practice the state of the balance of payments generally affords a clear enough indication. Exchange depreciation as a buffer policy may be a regrettable necessity when the buffer stock of

international cash runs out. For the unneighbourly policy of exchange dumping, on the other hand, there is no justification.

Thus the code of action which should guide international exchange adjustments in the light of past experience is clear enough in essentials; but its application is apt to encounter serious difficulties if countries are not capable of dealing with domestic depressions otherwise than by efforts to create or maintain a surplus in their foreign transactions.

Exchange adjustment and exchange rationing have been treated to some extent as alternative instruments of a "buffer" policy. As far as the net balance of international payments is concerned, they may produce the same results. But that does not mean that there is nothing to choose between them. While exchange rationing and other import restrictions may produce results more quickly and certainly, and may therefore be unavoidable in temporary emergencies affecting countries short of liquid reserves, their effect is always to curtail international trade. The method of exchange adjustment is obviously preferable, especially in cases of persistent long-run disequilibria.

The international division of labour is a labour-saving device. It may be a natural impulse in times such as occurred only too frequently in the inter-war period when there is surplus labour in the form of involuntary unemployment to discard labour-saving devices and to go back to more primitive processes. But this defeatist policy implies a permanent reduction in the general standard of welfare and is furthermore quite unnecessary since other methods are available for the maintenance of economic activity without a reduction in the level of economic efficiency.

4 DOMESTIC STABILITY AS A PREREQUISITE OF EXCHANGE STABILITY

In general, the need for exchange adjustments or exchange controls will tend to be the less frequent (a) the greater the total amount of international monetary reserves; (b) the greater and steadier the flow of international investment; and (c) the closer the correspondence or coordination between national policies affecting income, employment and prices, particularly in the leading industrial states.

Experience has shown that stability of exchange rates can no longer be achieved by domestic income adjustments if these involve depression and unemployment. Nor can it be achieved if such income adjustments involve a general inflation of prices which the country concerned is not prepared to endure. It is therefore only as a consequence of internal stability, above all in the major countries, that there can be any hope of securing a satisfactory degree of exchange stability as well.

Maintenance of adequate employment and avoidance of price inflation are both essential elements of domestic stability. With such

stability, occasions for exchange adjustment might still arise owing to technological developments, shifts in demand for particular products, etc.; but the main hindrance to stable exchanges would be removed.

There was a growing tendency during the inter-war period to make international monetary policy conform to domestic social and economic policy and not the other way round. Yet the world was still economically interdependent; and an international currency mechanism for the multilateral exchange of goods and services, instead of primitive bilateral barter, was still a fundamental necessity for the great majority of countries. The problem was to find a system of international currency relations compatible with the requirements of domestic stability. Had the period been more than a truce between two world wars, the solution that would have evolved would no doubt have been in the nature of a compromise. In the light of all indications furnished by the history of this period, one may suppose that the solution would have contained at least the following elements:

(a) Use of gold as a medium of international settlement, and release of the legal "cover" reserves for this use;

(b) Determination of the exchange rates of at least the major powers by mutual agreement;

(c) Prolonged *de facto* stabilization, without permanent commitments, of the principal currencies *inter se*, and a consequent amalgamation of currency areas into a single system of stable exchange rates *de facto*;

(d) International cooperation to reduce the amount and mitigate the effects of abnormal transfers of liquid private funds;

(e) Some coordination in the general fiscal and banking policy of the major powers designed to combat violent fluctuations in incomes and as a by-product to secure more stable outlets for raw-material producing countries.

From all that has been said before, it is clear that the last point is of special importance. Any system of generally stable exchanges presupposes some coordination between the movement of income, prices and economic activity in different countries. The traditional gold standard was a system which imposed a relatively high degree of coordination in national monetary policies and business conditions. But this coordination usually involved wide fluctuations of income and employment in all countries simultaneously. Such "synchronization" of cyclical movements has tended to become less and less acceptable to a growing number of countries. There has developed an insistent demand for economic stability and social security. The only form of synchronization compatible with this demand is a coordination of policies aiming at a stable level of good employment.

At bottom, however, the maintenance of a stable and adequate level of economic activity in the advanced industrial countries is a domestic

responsibility for each of these countries; and if some of them lack the will, the knowledge or the power to achieve it, no formal agreement for the coordination of anti-cyclical policies is likely to secure the desired effect. In that case there would be need for international agreement of another kind, namely, agreement in regard to measures (such as those considered in the last section) designed as far as possible to prevent depression in one country from spreading to others. This, admittedly, would be only a *pis aller*, a palliative; and it may imply an unduly pessimistic view of the will, the knowledge and the power of advanced industrial countries to avert or mitigate depression at home by measures of domestic policy. The will must spring inevitably from the demand of the wide masses of working people for security of employment and income; knowledge of the various possible tools of anti-cyclical policy has been spreading; and the power to use these tools has increased with the steady growth of governmental and other central agencies and controls in the field of economic affairs.¹ Even without any international agreement, the spontaneous adoption and pursuit by different countries of the same basic objective—economic stability and full employment—is not an impossible hypothesis in these circumstances.

The nineteenth-century gold standard system did not emerge as the result of an international convention or agreement imposing a set of formal obligations on the member countries. It sprang up spontaneously through the recognition by various individual nations of certain common objectives, chief among them being exchange stability. But the mechanism by which this stability was maintained involved parallel fluctuations of economic activity in the different countries. The instability of the system as a whole was the price paid for stability of exchange rates between the members. In the course of time this price was felt to be too great; economic advance and growing social consciousness led to a demand for greater stability of income and employment.

One of the manifestations of this search for stability was the preoccupation of international conferences in the 'twenties with the problem of "preventing undue fluctuations in the purchasing power of gold." This reflected a concern for the stability of the system as a whole; but the aim in view was too limited and, being too limited, unattainable. For price stability does not ensure stability of income and employment, and cannot in fact be achieved in the long run except through stable income and employment.

At the same time individual countries in their desire to insulate themselves from outside disturbances began to deviate from the

¹ A discussion of the methods of regulating domestic demand in the interests of economic stability lies outside the scope of the present volume. The reader is referred to the Report of the Delegation on Economic Depressions, Part I: *The Transition from War to Peace Economy* (League of Nations, 1943). Part II of this report, dealing with normal peace-time policies, is to be published shortly.

traditional "rules of the game." The practice of neutralizing the effect of gold movements on the internal money supply became increasingly common during the inter-war period. This tended indeed to keep the credit base more stable, but it was not by itself sufficient to offset the direct effects of balance-of-payments fluctuations on national income and expenditure.

There has developed a growing realization that stability of income and employment calls for policies operating not merely on prices and the credit base but on the volume of effective demand; and this affords a new hope for stability on a wider front. While the synchronization of national policies required under the gold standard conflicted at times with the demands of internal stability and was for this very reason gradually abandoned, a synchronization of policies aimed at sustaining and steadying effective demand in the various countries would promote both internal stability and stability of exchange rates at the same time.

Just as the gold standard grew up through the spontaneous recognition of a common primary objective (exchange stability), so a new international currency system may develop from a common acceptance of the need to maintain employment and economic stability. Such a system would incidentally put an end to the paradoxical conditions in which, for lack of home demand, countries endeavoured to stimulate domestic employment by "improving" their trade balances through measures which inevitably tended to disrupt the equilibrium of international settlements. "When productive resources are being employed to the full, exports can no longer be viewed as a means to provide employment; they become the necessary means to pay for what is really required and consumed, namely, imports. Thus, the new objective of economic policy, if realized, should overcome many of the major impediments on the road to a saner commercial policy that have trammelled us in the past."¹

¹ League of Nations, Economic and Financial Committees: *Report to the Council on the Work of the 1943 Joint Session*, p. 15.

STATISTICAL APPENDICES

APPENDIX I

GOLD SUPPLY

In millions of U.S. dollars of old gold parity (\$20.67 per fine ounce)

	World output ^a	Eastern dishoarding ^b	Central reserves ^c	Change in central reserves	Industrial consumption ^d
1914	448		5,345		
1915	472		6,241	+ 806	
1916	455		6,630	+ 389	
1917	421		7,147	+ 517	
1918	384		6,816 ^e		
1919	358		6,805 ^e		
1920	333		7,255 ^e		
1921	330		8,044 ^e		
1922	320		8,417		156
1923	369		8,651	+ 234	153
1924	385		8,976	+ 325	146
1925	384		8,997	+ 21	152
1926	395		9,233	+ 236	142
1927	394		9,593	+ 360	124
1928	390		10,057	+ 464	119
1929	397		10,336	+ 279	
1930	432		10,944	+ 608	102
1931	461	146	11,323	+ 379	63
1932	498	224	11,933	+ 610	36
1933	525	152	11,976	+ 43	40
1934	570	152	13,050	+ 1,074	39
1935	625	102	12,990	— 60	49
1936	688	77	13,600	+ 710	46
1937	730	40	14,400	+ 800	47
1938	780	34	15,300	+ 900	30

^a Source: U.S. Bureau of Mint. The estimates include the U.S.S.R.

^b Source: Bank of International Settlements.

^c Source: Federal Reserve Bulletin, September 1940. Reported gold reserves of central banks and governments (excluding in particular certain stabilization funds, such as the British Exchange Equalization Account).

^d Source: U.S. Bureau of Mint. Gross estimates, including not only the new gold but also the scrap and coin used in the arts. The net consumption, excluding scrap and coin, has been estimated at an annual average of \$100 million during the five years 1925-1929 (see *Interim Report of the Gold Delegation*, League of Nations 1930, p. 90).

^e Excluding Russia's reserve, not reported in those years; reported at \$666 million in 1917 and at \$3 million in 1922.

APPENDIX II

FOREIGN EXCHANGE AND GOLD RESERVES OF CENTRAL BANKS U.S. \$(000,000's)

A: Foreign Exchange. B: Gold. C: Total. D: Foreign Exchange as % of Total

	End of:	1924	1925	1926	1927	1928	1929	1930	1931	1932
Austria	A	67	79	96	105	102	93	113	20	8
	B	2	2	7	12	24	24	30	27	21
	C	69	81	103	117	126	117	143	47	29
	D	97	98	93	90	81	79	79	43	28
Belgium	A	6	6	62	73	79	85	135	—	—
	B	52	53	86	100	126	163	191	354	361
	C	58	59	148	173	205	248	326	354	361
	D	10	10	42	42	39	34	41	—	—
Bulgaria	A	7	4	5	8	20	8	6	2	1
	B	8	8	8	9	10	10	11	11	11
	C	15	12	13	17	30	18	17	13	12
	D	47	33	38	47	67	44	35	15	8
Czecho- slovakia	A	20	36	62	72	74	68	72	31	30
	B	27	27	27	30	34	37	46	49	51
	C	47	63	89	102	108	105	118	80	81
	D	43	57	70	71	69	65	61	39	37
Danzig	A	6	5	8	7	8	8	9	5	3
	B	—	—	—	—	—	—	—	4	4
	C	6	5	8	7	8	8	9	9	7
	D	100	100	100	100	100	100	100	56	43
Denmark	A	13	24	7	26	31	24	27	4	—1
	B	56	56	56	49	46	46	46	39	36
	C	69	80	63	75	77	70	73	43	35
	D	19	30	11	35	40	34	37	9	—
Estonia ^a	A	1	1	1	3	7	6	4	4	1
	B	3	3	3	3	2	2	2	2	4
	C	4	4	4	6	9	8	6	6	5
	D	25	25	25	50	78	75	67	67	20
Finland	A	14	31	27	32	19	17	24	16	19
	B	8	8	8	8	8	8	8	8	8
	C	22	39	35	40	27	25	32	24	27
	D	64	79	77	80	70	68	75	67	70
France	A	14	13	116*	850*	1287	1021	1027	842	176
	B	710	711	711	954	1254	1633	2099	2699	3257
	C	724	724	827*	1804*	2541	2654	3126	3541	3433
	D	2	2	14	47	51	38	33	24	5
Germany	A	310	243	230	113	126	194	182	—29	—29
	B	181	288	436	444	650	544	528	234	192
	C	491	531	666	557	776	738	710	205	163
	D	63	46	35	20	16	26	26	—	—
Greece	A	36	30	32	34	48	32	32	14	13
	B	12	13	14	14	7	8	7	11	8
	C	48	43	46	48	55	40	39	25	21
	D	75	70	70	71	87	80	82	56	62
Hungary	A	35	61	43	36	17	14	12	4	3
	B	7	10	30	34	35	29	29	18	17
	C	42	71	73	70	52	43	41	22	20
	D	83	86	59	51	33	33	29	18	15

* 1924-27: Bank of Estonia and Treasury.

* Estimated (largely held under "sundry assets").

APPENDIX II (*continued*)

	End of :	1924	1925	1926	1927	1928	1929	1930	1931	1932
Italy	A	21	64	156	398	317	271	228	114	69
	B	221	221	223	239	266	273	279	296	307
	C	242	285	379	637	583	544	507	410	376
	D	9	22	41	62	54	50	45	28	18
Latvia	A	9	6	6	10	15	11	8	3	2
	B	5	5	5	5	5	5	5	6	7
	C	14	11	11	15	20	16	13	9	9
	D	64	55	55	67	75	69	62	33	22
Lithuania	A	6	3	4	5	5	8	9	3	2
	B	3	3	3	3	3	3	4	5	5
	C	9	6	7	8	8	11	13	8	7
	D	67	50	57	63	63	73	69	38	29
Netherlands	A	45	99	75	67	88	88	99	35	29
	B	203	178	166	161	175	180	171	357	415
	C	248	277	241	228	263	268	270	392	444
	D	18	36	31	29	33	33	37	9	7
Norway	A	14	19	24	16	11	18	19	6	8
	B	39	39	39	39	39	39	39	42	39
	C	53	58	63	55	50	57	58	48	47
	D	26	33	38	29	22	32	33	13	17
Poland	A	49	1	24	100	80	59	46	24	15
	B	20	26	27	58	70	79	63	67	56
	C	69	27	51	158	150	138	109	91	71
	D	71	4	47	63	53	43	42	26	21
Portugal	A	18	18	10	8	16	17	9	21	20
	B	11	11	9	9	9	9	9	13	24
	C	29	29	19	17	25	26	18	34	44
	D	62	62	53	47	64	65	50	62	45
Roumania	A	—	—	—	—	—	40	10	2	3
	B	48	48	49	51	49	55	56	58	57
	C	48	48	49	51	49	95	66	60	60
	D	—	—	—	—	—	42	15	3	5
Spain	A	7	6	7	7	18	19	16	54	55
	B	489	490	493	502	494	495	471	434	436
	C	496	496	500	509	512	514	487	488	491
	D	1	1	1	1	4	4	3	11	11
Sweden	A	36	54	56	70	58	71	105	13	57
	B	64	62	60	62	63	66	65	55	55
	C	100	116	116	132	121	137	170	68	112
	D	36	47	48	53	48	52	62	19	51
Switzerland	A	37	43	43	38	49	68	85	20	17
	B	98	90	91	100	103	115	138	453	477
	C	135	133	134	138	152	183	223	473	494
	D	27	32	32	28	32	37	38	4	3
Yugoslavia	A	74	71	65	67	45	52	23	8	4
	B	14	15	17	17	18	18	19	31	31
	C	88	86	82	84	63	70	42	39	35
	D	84	83	79	80	71	74	55	21	11
Total (24 countries)	A	845	917	1159	2145	2520	2292	2300	1216	505
	B	2281	2367	2568	2903	3490	3841	4316	5273	5879
	C	3126	3284	3727	5048	6010	6133	6616	6489	6384
	D	27	28	31	42	42	37	35	19	8
Total excl. France (23 countries)	A	831	904	1043	1295	1233	1271	1273	374	329
	B	1571	1656	1857	1949	2236	2208	2217	2574	2622
	C	2402	2560	2900	3244	3469	3479	3480	2948	2951
	D	35	35	36	40	36	37	37	13	11

APPENDIX III

RESERVES OF STERLING-AREA MEMBER COUNTRIES

(000,000's omitted)

Central Foreign Exchange Reserves (in £ stg.)

End of:	1929	1931	1932	1933	1934	1935	1936	1937	1938
Australia	7.9	13.3	18.0	34.7	39.2	30.4	30.2	38.5	32.2
Denmark	5.0	0.8	-0.3	-1.5	-3.8	-4.1	-2.3	3.4	4.7
Egypt	28.8	19.2	15.7	18.7	17.8	22.2	21.7	17.7	18.2
Eire	7.1	7.4	7.4	7.7	7.9	8.3	9.1	9.7	8.9
Estonia	1.2	0.9	0.3	0.2	0.4	0.3	0.6	1.2	1.1
Finland	3.5	3.0	3.8	6.9	7.4	6.9	7.7	10.5	11.9
India	57.0	26.1	41.9	44.4	62.6	62.7	64.7	62.9	53.2
Latvia	2.2	0.7	0.6	0.2	0.2	0.4	1.1	1.8	1.5
New Zealand	.	.	.	.	17.1	17.3	13.3	13.7	3.8
Norway	3.7	1.2	1.7	0.3	2.3	2.6	6.0	12.0	12.1
Palestine	1.9	2.3	3.0	4.2	5.0	5.3	4.8	4.8	4.2
Portugal	2.5	4.7	4.3	1.1	2.3	2.7	3.9	4.1	3.7
Sweden	14.7	2.7	11.9	24.8	30.7	34.9	39.8	54.7	41.7
Thailand	8.8	0.1	0.4	7.5	9.1	9.7	10.2	10.8	11.3
Un. of S. Africa	6.6	-	-	18.6	10.5	11.5	10.8	6.9	7.6
Total	150.9	82.4	108.7	167.8	208.7	211.1	221.6	253.6	216.1

Central Gold Reserves (in old U.S. \$)

Australia	89	51	41	2	2	2	1	1	1
Denmark	46	39	36	36	36	32	32	32	32
Egypt	19	21	33	33	32	32	32	32	32
Eire	-	-	-	-	-	-	-	-	5
Estonia	2	2	4	5	7	9	9	9	9
Finland	8	8	8	8	8	12	19	16	16
India	128	162	162	162	162	162	162	162	162
Latvia	5	6	7	9	9	9	9	9	10
New Zealand	28	28	21	21	15	14	14	14	14
Norway	39	42	39	36	34	42	46	43	48
Portugal	9	13	24	34	40	40	40	41	41
Sweden	66	55	55	99	94	109	142	144	190
Thailand	-	-	28	-	-	-	-	-	-
Un. of S. Africa	37	43	36	83	108	125	120	112	130
Total	476	470	494	528	547	588	626	615	690
Conversion rate (old U.S. \$ per £ stg.)	4.87	3.37	3.28	3.28	2.94	2.93	2.90	2.95	2.76
Total in £ stg.	97.5	139.3	150.7	161.1	186.0	200.9	215.6	208.4	250.1

Commercial Banks' Foreign Exchange Holdings (in £ stg.)

Denmark	2.0	-1.2	- .5	1.1	- .4	- .3	- .6	.2	.
Estonia	.1	- .3	- .1	-	- .1	- .7	.1	.2	.
Finland	-1.3	.6	-	.6	1.6	.8	1.4	.4	.6
Latvia	-	- .9	- .5	- .2	- .2	- .1	.4	.2	.
Norway	3.1	1.5	.7	.3	1.3	1.2	1.4	.1	.2
New Zealand	.	.	.	.	14.8	11.9	9.3	5.4	1.7
Sweden	10.1	6.3	6.5	2.2	5.1	4.5	1.0	-7.0	-6.7
Un. of S. Africa	4.9	5.6	7.6	5.5	6.1	9.8	5.3	9.7	10.0

APPENDIX IV

TABLE I

CHANGES IN CENTRAL BANKS' INTERNATIONAL AND DOMESTIC ASSETS

A: Change in international assets } as percentage of total international and do-
 B: Change in domestic assets } mestic assets at the end of the previous year.
 C: Ratio of B to A.

Note.—The calculations of A and B are based on the amounts as shown in central banks' balance-sheets in terms of national currency. The A figures are in some cases affected by revaluation of existing gold and exchange reserves. Where available, *net* amounts of foreign exchange have been used for A. The domestic assets used for B include discounts, loans and securities, and exclude sundry assets, premises, etc.

	Australia ^a			Austria			Bulgaria		
	A	B	C	A	B	C	A	B	C
1922	+ 6.4	-12.2	- 1.9				+ 0.5	+16.7	+31.6
1923	- 9.5	+13.8	- 1.4				+13.7	+ 9.4	+ 0.7
1924	+ 5.2	- 2.8	- 0.5	- 8.1	+23.8	- 3.0	- 1.7	+10.1	- 6.0
1925	+13.6	- 8.4	- 0.6	+21.7	-16.1	- 0.7	- 7.4	+ 0.6	- 0.1
1926	-13.3	+ 6.7	- 0.5	+14.7	-12.7	- 0.9	- 9.7	+10.6	- 1.1
1927	+ 8.1	+ 1.0	+ 0.1	+ 9.2	+ 0.4	0	+27.9	-13.4	- 0.5
1928	-18.4	-10.9	+ 0.6	+ 5.5	+ 1.8	+ 0.3	+31.1	-12.2	- 0.4
1929	- 1.0	+ 1.3	- 1.3	- 5.2	+ 7.7	- 1.5	-16.5	- 2.1	+ 0.1
1930	-10.4	+ 1.3	- 1.3	+14.9	-13.1	- 0.9	- 3.9	-11.6	+ 3.0
1931	+ 3.4	+51.0	+14.9	-53.9	+59.2	- 1.1	- 7.4	- 1.5	+ 0.2
1932	- 5.9	- 1.5	+ 0.3	- 9.5	+ 2.5	- 0.3	- 2.1	- 2.1	+ 1.0
1933	+ 7.4	- 8.3	- 1.1	+ 1.9	-11.5	- 6.0	+ 0.8	+ 5.7	+ 7.5
1934	+10.8	+ 5.2	+ 0.5	+ 7.5	- 3.5	- 0.5	- 0.3	- 5.5	+20.7
1935	- 8.7	- 0.6	+ 0.1	+ 7.3	- 0.9	- 0.1	+ 6.5	+ 7.5	+ 1.1
1936	+ 3.8	+ 5.6	+ 1.5	- 1.2	- 1.8	+ 1.5	+ 5.2	- 1.9	- 0.4
1937	+12.0	- 0.9	- 0.1	+ 6.5	- 2.3	- 0.4	+ 3.0	+14.1	+ 4.7
1938	- 1.1	+ 2.1	- 1.9				+ 8.5	- 5.8	- 0.7

	Chile			Colombia			Czechoslovakia		
	A	B	C	A	B	C	A	B	C
1922							+ 1.3	-13.2	-10.4
1923							+ 6.6	- 1.6	- 0.2
1924							- 2.7	-27.8	+10.4
1925							+ 4.7	-15.4	- 3.3
1926							+10.1	-17.9	- 1.8
1927	- 3.1	+ 4.3	- 1.4				+ 5.3	- 6.2	- 1.2
1928	+ 9.7	- 1.2	- 0.1	+32.1	- 8.8	- 0.3	+ 3.0	+ 0.1	0
1929	-10.9	+15.6	- 1.4	-34.2	+ 8.1	- 0.2	- 1.7	+ 2.3	- 1.4
1930	-18.8	- 0.9	0	-18.0	- 4.3	+ 0.2	+ 5.6	- 9.6	- 1.7
1931	-32.2	+46.4	- 1.4	-30.5	+27.4	- 0.9	-16.1	+18.3	- 1.1
1932	- 7.9	+86.5	-10.9	+ 8.1	+16.3	+ 2.0	+ 0.3	-13.2	-38.4
1933	+ 1.4	+ 2.5	+ 1.8	- 0.7	+32.5	-44.0	- 1.5	- 0.3	+ 0.2
1934	- 2.6	- 3.0	+ 1.2	- 1.0	+12.8	-13.0	+ 3.9	-12.5	- 3.2
1935	0	+ 2.5	∞	+20.2	+ 0.8	0	- 2.2	- 1.3	+ 0.6
1936	+ 0.2	+ 8.6	+40.0	+10.2	+ 6.4	+ 0.6	+ 4.2	+15.7	+ 3.8
1937	0	+ 4.3	∞	- 4.9	+10.3	- 2.1	+ 1.0	+ 3.8	+ 3.8
1938	+ 0.1	+ 9.9	∞	+ 9.0	- 8.3	- 0.9	+ 6.5	-14.1	- 2.2

^a From June 30th of the previous year to June 30th of the year shown.

APPENDIX IV (*continued*)

	Denmark ^b			Finland			France ^c		
	A	B	C	A	B	C	A	B	C
1922	- 4.0	+19.8	- 5.0	+31.2	-14.1	- 0.5			
1923	- 3.7	- 3.7	+ 1.0	- 8.5	+ 1.3	- 0.2			
1924	- 0.7	+15.8	-23.5	- 2.6	-12.4	+ 4.8			
1925	+13.6	-28.7	- 2.1	+60.4	-11.7	- 0.2			
1926	-12.5	- 4.0	+ 0.3	- 7.8	+ 8.0	+ 1.0			
1927	- 1.0	- 6.8	+ 6.6	+ 8.1	+ 6.8	+ 0.8	+38.9	-23.4	- 0.6
1928	+ 6.3	-12.9	- 2.1	-19.6	+24.2	- 1.2	+51.1	-28.6	- 0.6
1929	- 2.4	+ 9.6	- 4.0	- 2.1	- 6.5	+ 3.1	+ 3.7	+ 4.8	+ 1.3
1930	+ 2.1	- 0.6	- 0.3	+ 9.3	-14.8	- 1.6	+13.8	+ 0.1	0
1931	-23.1	+18.6	- 0.8	-12.6	+14.2	- 1.1	+10.2	+ 1.5	+ 0.2
1932	- 6.6	+18.4	- 2.8	+ 4.8	- 5.7	- 1.2	- 2.1	- 3.7	+ 1.7
1933	- 4.2	+ 7.7	- 1.8	+23.5	-19.0	- 0.8	- 9.0	+ 0.6	- 0.1
1934	- 7.6	+21.5	- 2.8	+ 4.5	0	0	+ 5.2	- 0.4	- 0.1
1935	- 3.3	- 0.7	+ 0.2	+ 1.8	+ 5.9	+ 3.3	-15.4	+ 6.1	- 0.4
1936	+ 5.4	- 8.8	- 1.6	+18.9	+ 6.4	+ 0.3	- 6.4	+17.1	- 2.7
1937	+18.0	- 7.7	- 0.4	+ 9.6	+ 4.9	+ 0.5	- 1.9	+10.3	- 5.3
1938	+ 3.5	+ 1.9	+ 0.5	+17.3	+ 1.6	+ 0.1	+25.7	+ 1.5	+ 0.1
	Germany			Greece ^a			Hungary		
	A	B	C	A	B	C	A	B	C
1923				+11.4	+21.8	+ 1.9			
1924	+84.5	+123.7	+ 1.5	- 0.7	+12.0	-16.6			
1925	+ 6.4	-11.4	- 1.8	+13.9	+ 5.7	+ 0.4			
1926	+14.4	- 0.4	0	+ 3.1	- 2.3	- 0.7	-17.1	+ 9.1	- 0.5
1927	-10.1	+34.6	- 3.4	+ 0.6	- 0.5	- 0.8	+ 3.9	+14.1	+ 3.6
1928	+16.4	-10.2	- 0.6				- 7.4	+44.4	- 6.0
1929	- 2.7	+ 3.3	- 1.2	-13.8	+ 0.3	0	- 1.2	-34.9	+30.1
1930	- 1.9	- 2.8	+ 1.4	- 7.7	+ 1.1	- 0.1	- 1.8	- 8.3	+ 4.6
1931	-37.0	+33.1	- 0.9	-21.2	- 0.9	0	-17.9	+23.1	- 1.3
1932	- 3.3	-24.0	+ 7.4	- 5.2	+45.4	- 8.8	- 1.3	+ 4.0	- 3.1
1933	- 1.9	+14.9	- 7.7	+25.7	+ 3.9	+ 0.2	- 0.8	+25.3	-32.4
1934	- 9.7	+25.1	- 2.6	+ 0.8	- 7.6	- 9.9	+ 0.1	- 0.5	- 4.0
1935	+ 1.7	+ 4.2	+ 2.4	- 6.0	+21.4	- 3.6	+ 4.7	- 2.3	- 0.5
1936	- 1.5	+15.5	-10.5	- 0.9	+ 9.7	-10.9	- 2.9	- 2.1	+ 0.7
1937	+ 1.3	+ 7.1	+ 5.3	+ 2.1	+ 8.6	+ 4.1	+ 2.1	- 8.4	- 4.1
1938	+ 0.1	+39.9	∞	+ 1.2	+20.3	+17.4	+10.9	+29.3	+ 2.7
	Italy			Japan			Netherlands ^d		
	A	B	C	A	B	C	A	B	C
1922				-19.5	-11.5	+ 0.6	+ 5.2	- 7.5	- 1.4
1923				- 2.1	+15.1	- 7.2	- 9.4	+12.7	- 1.4
1924				- 0.8	- 5.4	+ 7.3	+ 4.6	-13.5	- 2.9
1925				- 3.0	-11.0	+ 3.7	- 3.7	- 3.4	+ 0.9
1926				+ 0.5	+ 6.8	+13.3	- 4.2	+ 0.9	- 0.2
1927	+24.0	-36.8	- 1.5	- 0.6	+ 8.7	-13.9	+ 5.3	- 4.9	- 0.9
1928	- 5.1	+ 0.2	0	+ 0.1	- 3.5	-40.0	-17.0	+17.1	- 1.0
1929	- 3.8	+ 2.3	- 0.6	+ 5.5	- 2.8	- 0.5	+18.9	-19.2	- 1.0
1930	- 3.8	- 2.5	+ 0.7	-11.5	+ 1.4	- 0.1	+ 4.0	- 2.7	- 0.7
1931	- 9.7	+ 6.3	- 0.6	-24.1	+14.5	- 0.6	+30.5	+ 0.3	0
1932	- 3.6	+ 6.7	- 1.9	- 0.9	+ 7.5	- 8.1	+ 5.5	- 4.2	- 0.8
1933	+ 1.4	-13.8	-10.2	- 4.0	+ 9.2	- 2.3	-20.4	+ 6.1	- 0.3
1934	- 9.3	+10.6	- 1.1	+ 2.0	+ 1.5	+ 0.7	- 0.2	- 1.3	+ 6.5
1935	-15.0	+13.6	- 0.9	+ 4.6	+ 4.5	+ 1.0	- 7.1	- 0.9	+ 0.1
1936	+ 3.8	+ 5.6	+ 1.5	- 0.7	+ 3.1	- 4.2	+22.8	+ 5.3	+ 0.2
1937	0	+ 8.0	∞	+10.8	+10.9	+ 1.0	+47.0	+ 9.3	+ 0.2
1938	- 1.0	+12.1	-11.5	+ 0.1	+11.6	∞	- 7.9	- 4.9	+ 0.6

^b Up to 1929, the years run from July 31st to July 31st. Calendar years from 1930.

^c A in 1927 is estimated. Most of the foreign assets acquired in that year were held under "sundry assets."

^d Up to 1927, National Bank. Thereafter, Bank of Greece.

^e March 31st in the year shown to March 31st in the year following.

APPENDIX IV (continued)

	Norway			Peru			Poland		
	A	B	C	A	B	C	A	B	C
1922	+ 1.7	- 2.0	- 1.2						
1923	- 4.0	- 5.8	+ 1.5						
1924	+ 3.2	-13.9	- 4.3						
1925	+ 3.6	-15.0	- 4.2				-24.5	+17.4	- 0.7
1926	+ 3.9	+44.2	+11.4				+32.9	- 3.9	- 0.1
1927	- 4.4	-26.4	+ 6.1				+185.2	+19.6	+ 0.1
1928	- 3.6	+ 1.9	- 0.5				-23.9	+10.8	- 0.5
1929	+ 5.3	- 5.3	- 1.0				- 5.0	+ 3.0	- 0.6
1930	+ 0.9	-10.0	-11.8	0	- 6.0	∞	-11.8	- 5.4	+ 0.5
1931	- 9.4	+17.3	- 1.9	+11.5	-18.0	- 1.6	- 9.1	+ 3.5	- 0.4
1932	- 0.4	- 1.3	+ 3.0	-26.0	+11.0	- 0.4	-10.6	- 1.4	+ 0.1
1933	- 6.0	+ 5.1	- 0.9	+ 6.5	+45.2	+ 7.0	- 5.1	+ 8.0	- 1.6
1934	+ 6.2	- 1.6	- 0.3	0	+13.8	∞	- 2.2	+ 2.1	- 0.9
1935	+11.7	- 9.2	- 0.8	+ 2.8	- 2.8	- 1.0	- 4.0	+10.0	- 2.5
1936	+18.7	+ 3.1	+ 0.2	+ 0.9	+23.4	+25.0	- 3.0	+ 4.6	- 1.5
1937	+15.7	-12.9	- 0.8	+ 6.8	+ 0.8	+ 0.1	+ 3.0	-10.0	- 3.4
1938	+ 1.7	+ 6.3	+ 3.8	- 6.3	+17.5	- 2.8	- 0.5	+16.8	-31.6

	Roumania			Sweden			Switzerland		
	A	B	C	A	B	C	A	B	C
1922				+11.2	- 7.9	- 0.7	0	+ 0.8	∞
1923				-10.5	+ 1.9	- 0.2	+ 2.1	- 6.2	- 3.0
1924				- 4.7	+ 0.1	0	+ 6.7	-10.3	- 1.5
1925				+ 6.6	- 9.3	- 1.4	- 1.0	- 2.7	+ 2.6
1926				0	-10.5	∞	+ 0.5	+ 2.8	+ 5.2
1927	- 1.5	+ 2.8	- 1.9	+ 7.8	+ 1.9	+ 0.2	+ 2.2	+ 4.9	+ 2.3
1928	- 0.7	+10.1	-14.3	- 4.9	+ 9.6	- 2.0	+ 7.4	+ 3.0	+ 0.4
1929	+46.3	-54.9	- 1.2	+ 6.6	- 4.6	- 0.7	+14.3	- 7.7	- 0.5
1930	-16.2	- 5.6	+ 0.3	+14.3	- 8.4	- 0.6	+ 9.0	+ 1.1	+ 0.1
1931	- 4.7	+24.2	- 5.2	-39.5	+24.6	- 0.6	+102.6	- 8.9	- 0.1
1932	+ 4.7	+ 5.6	+ 1.2	+19.6	-14.5	- 0.7	+ 4.1	- 0.9	- 0.2
1933	+ 3.3	- 3.4	- 1.1	+46.2	-18.4	- 0.4	-20.2	+ 4.1	- 0.2
1934	+ 1.3	+ 4.0	+ 3.2	+ 7.9	- 8.2	- 1.0	- 4.3	- 2.2	+ 0.5
1935	+ 5.4	- 1.3	- 0.2	+12.8	-11.1	- 0.9	-24.5	+11.8	- 0.5
1936	+12.7	- 1.6	- 0.1	+18.0	+ 0.1	0	+74.0	-17.7	- 0.2
1937	+ 5.3	+ 1.3	+ 0.3	+25.4	- 1.8	- 0.1	+14.7	- 1.0	- 0.1
1938	+ 1.7	+18.6	+11.2	- 2.6	+ 6.6	- 2.5	- 0.7	+ 5.6	- 8.4

	Un. of S. Africa*			United Kingdom*			United States		
	A	B	C	A	B	C	A	B	C
1922	+28.6	+16.1	+ 0.6	- 0.4	- 3.8	+10.0	+ 3.9	- 5.6	- 1.4
1923	+16.0	- 9.3	- 0.6	+ 0.2	+ 0.7	+ 3.0	+ 0.8	- 2.6	- 3.5
1924	+19.1	-16.2	- 0.8	+ 0.2	+14.6	∞	- 3.3	+ 0.9	- 0.3
1925	-18.5	+ 6.2	- 0.3	+ 5.1	- 1.5	- 0.3	- 5.6	+ 3.5	- 0.6
1926	+30.8	- 5.1	- 0.2	+ 2.2	-11.1	- 5.1	+ 2.9	- 1.5	- 0.5
1927	- 1.0	+ 2.0	- 2.0	+ 0.5	- 2.6	- 4.9	- 2.1	+ 6.2	- 3.0
1928	- 2.5	+ 3.5	- 1.4	+ 0.8	+76.2	∞	- 3.4	+ 4.4	- 1.3
1929	-14.5	+ 9.0	- 0.6	- 1.5	- 0.8	+ 0.5	+ 6.3	- 5.4	- 0.9
1930	+ 5.3	- 5.3	- 1.0	+ 0.4	+ 9.2	+25.9	+ 1.9	- 4.5	- 2.3
1931	-48.7	+31.2	- 0.6	- 4.8	+ 3.9	- 0.8	+ 1.3	+11.0	+ 8.5
1932	+125.6	-23.1	- 0.2	- 0.2	- 3.8	+23.6	+ 4.7	+ 6.3	+ 1.3
1933	+45.3	-10.8	- 0.2	+13.4	- 6.7	- 0.5	+ 6.5	+10.1	+ 1.6
1934	- 9.7	0	0	+ 0.3	- 2.0	- 7.1	+25.2	- 3.4	- 0.1
1935	- 3.1	+ 0.3	- 0.1	+ 1.4	- 2.7	- 2.0	+31.9	+ 0.2	0
1936	- 0.8	- 0.5	+ 0.7	+20.2	+ 2.0	+ 0.1	+12.9	- 0.1	0
1937	-13.6	+ 3.5	- 0.3	+ 2.0	- 1.2	- 0.6	+ 2.3	+ 1.2	+ 0.5
1938	+15.4	- 3.6	- 0.2	0	- 2.3	∞	+22.8	- 0.1	0

* March 31st in the year shown to March 31st in the year following.

* B in 1928; due to transfer of currency note issue from Treasury to Bank of England.

APPENDIX IV (*continued*)

	Uruguay			Yugoslavia		
	A	B	C	A	B	C
1928	+ 3.8	+ 1.3	+ 0.3	- 1.7	- 1.3	+ 0.7
1929	- 6.9	+ 6.5	- 0.9	+ 0.7	- 3.8	- 5.9
1930	- 5.1	+ 5.6	- 1.1	- 2.4	+ 0.2	- 0.1
1931	- 4.2	- 5.2	+ 1.2	+32.9	-27.0	- 0.8
1932	- 0.6	+ 2.3	- 3.7	- 3.4	+ 3.2	- 0.9
1933	+ 1.5	- 6.0	- 4.1	- 0.1	- 7.1	+49.8
1934	- 3.6	- 5.8	+ 1.6	+ 0.8	- 5.3	- 6.4
1935	- 3.2	+18.8	- 5.9	- 3.8	+ 0.7	- 0.2
1936	- 1.6	+ 7.1	- 4.5	+ 7.1	+11.5	+ 1.6
1937	- 1.0	+ 7.4	- 7.1	- 0.5	+ 1.4	- 3.0
1938	+34.4	+ 9.0	+ 0.3	+ 6.3	+ 2.6	+ 0.4

TABLE 2

DISTRIBUTION OF GOLD RESERVES

Reported Central Gold Reserves in U.S. dollars of old parity (\$20.67 per ounce of fine gold)

	(000,000's)						
End of:	1913	1918	1923	1928	1933	1938	1943
Argentina	256	305	467	607	239	255	212 ^a
Australia	22	104	131	109	3	2	.
Belgium	48	51	52	126	380	343	433
Brazil	90	26	49	149	0	19	150
Canada	117	130	127	114	77	113	.
France	679	664	710	1,254	3,022	1,529 ^b	1,181
Germany	279	539	111	650	92	17	.
India	124	64	109	124	162	162	162
Italy	267	203	218	266	373	115	.
Japan	65	226	602	541	212	97	.
Netherlands	61	278	235	175	372	588	300
Spain	92	430	488	494	436	310	.
Sweden	27	77	73	63	99	189	228
Switzerland	33	80	104	103	387	414	569
Un. of S. Africa	34	33	53	39	83	131	417
United Kingdom	165	521	746	748	928	1,587 ^c	.
United States	1,290	2,658	3,834	3,746	4,012	8,609 ^d	12,969
U.S.S.R. (Russia)	786	.	45	92	416	.	.

Source: *Federal Reserve Bulletin*. For world totals, see Appendix I.

^a Excluding certain reserves included before 1940.

^b Including gold in Exchange Stabilization Fund.

^c Excluding gold in Exchange Equalization Account (\$448 million in September 1938).

^d Including gold in Exchange Stabilization Fund (Special Account No. 1).

INDEX

- Aftalion, A., 118n.
- Agricultural countries, 79, 84, 139, 140, 199, 201, 203, 214, 230; domestic monetary organization, 136, 193; exchange fluctuations, 124, 130n., 134-36, 138, 139, 193, 207; inflationary bias, 25, 135-36; need for international currency reserves, 13-14, 91, 93; neutralization, 84-86, 136, 194; position in pre-1914 gold standard, 134, 193; structural problems, 190, 192-95
- Agricultural production, advance in technique, 193; diversification, 136, 194; increase outside Europe (1914-18), 193
- Agricultural products (see also Primary products), 86, 139; elasticity of demand and supply, 134, 192; price fluctuations, 14, 65, 84, 86, 91, 114, 135, 192-93, 194
- Albania, 30
- Andrews, P. W. S., 104n.
- Argentina, 25, 30, 47, 48, 50, 51, 84, 89, 198; allocation of exchange, 174, 176, 178; central bank, 85, 136, 193; central reserve requirements, 97; control of export proceeds, 172; exchange fluctuations, 50-52, 85, 114, 124, 128, 129n., 134; export prices and importing capacity, 205n.; export products, 192, 194; neutralization, 84-85, 136, 194; preference to imports from U.K., 174; profits from exchange control, 170; trade and capital transfer under exchange control, 164; trade-balance fluctuations, 85, 91
- Askimark system, 168, 179, 182
- Australia, 19, 31, 48, 50, 51, 52, 59, 63, 69, 84, 91, 124, 129n., 134, 156; Commonwealth Bank, 51, 53, 55, 56, 58, 83, 84, 110; economic recovery (1931-36), 83; exchange depreciation and gold output, 17; exchange reserves, 54-58, 84; export products, 192, 194; external debt, 60; gold reserves, 55-57; industrial advance (1914-18), 195; Monetary and Banking Commission (1937), 53, 58, 83n., 97, 98, 106n., 110; neutralization (1938), 84; reserve requirements, 54, 97; trade-balance fluctuations, 91
- Austria, 30, 32, 69, 72, 83, 91, 116, 169; central bank's domestic and international assets, 72, 83; central bank's reserve ratio, 95, 97; devaluation (1931-34), 163, 167; gold and exchange reserves, 34, 56, 57, 89; neutralization, 72, 79; proposal for international equalization fund, 188; relaxation of exchange control, 163, 164, 169
- Austria-Hungary, 29
- Autarky, 177, 184, 200, 209
- Balance of payments, 15, 31-33, 59, 62, 71, 72, 74, 83, 85, 106, 112, 114, 125, 163, 165, 187n., 203, 206, 210, 219, 220; adjustment of, 38, 45, 67, 86-88, 98-105, 210, 225n., 226, 227; discrepancies in, 9, 11, 13-16, 20, 23, 64, 66, 91, 100, 138, 162, 165, 185, 202, 214, 218, 222-23; distribution of international currency reserves, 26, 88, 92, 94; equilibrium rate of exchange, 14n., 124-26, 228
- Bank of England, 11, 32, 39, 60, 63, 75, 76, 81, 97, 124, 125, 146, 151, 158, 159; deflation (1925-31), 75, 76; gold transfers from and to Exchange Equalization Account, 12, 98, 153, 159; other deposits, 63; public deposits, 154; security purchases and bank-rate reduction after 1931, 127
- Bank of France, 35-39, 76-78, 89, 117, 120, 158; advances to government, 76, 77, 122; exchange reserves (1926-28), 31, 35, 36, 76; legal maximum note-issue, 31, 96, 97; profits (1929-34), 43
- Basch, Antonin, 176n.
- "Beggar-my-neighbour" policy, 202, 207; compared with "buffer" policy, 112n., 200, 228
- Belgium, 29n., 30, 32, 69, 122, 129n.; devaluation (1935), 128; Exchange Stabilization Fund, 144-45, 152, 156, 158; gold reserves, 40, 57, 90; growth of manufacturing, 195; trade-balance fluctuations, 91
- Bilateralism, 177-83, 208-9; enforced by exchange control, 171, 174-75, 177-83, 223; import quotas, 177-78; not confined to exchange-control countries, 185; weakened by industrialization, 198-99
- "Black market" in foreign exchange, 169, 170
- Blocked balances, 168, 175, 176, 180
- Bolivia, 30, 52; devaluation, 169; exchange rate linked to price of tin, 134; Exchange Stabilization Fund, 156
- Brazil, 89, 114, 124, 128, 129n.; coffee exports, 192, 194; exchange rate and price of coffee, 134-35; imports of capital goods, 197; industrialization, 195-96
- Bresciani-Turroni, C., 99
- British Commonwealth of Nations, 47, 48

- Brown, W. A., Jr., 30n., 40n., 42n., 50n., 116n., 190n., 195n., 198n.
- "Buffer" policy, 112n., 200, 206-7, 227-29
- Buffer stocks of primary products, 86n., 194-95, 214
- Bulgaria, 29n., 30, 33, 40, 57, 114; central bank's international and domestic assets, 69, 82; central bank's reserve ratio, 97; credit contraction, 82; exchange control, 82, 169; import of capital goods, 197; neutralization and short-term capital movements, 72
- Business cycle, 38, 49, 54, 55, 58, 65, 84, 86, 104, 105, 107, 111, 124, 126, 130, 136, 138, 140, 155, 158, 193-94, 199-202, 212, 214, 219, 230
- Canada, 129n., 136, 198, 224; agriculture, 193; establishment of central bank, 193; exchange rate, 47, 128; Exchange Stabilization Fund, 152; industrial production, 195; trade-balance fluctuations, 91
- Capital flight, 78-79, 87, 102, 123, 149, 152; and exchange control, 164-65, 184-85, 187-89, 221; and exchange fluctuations, 114, 141; and international currency reserves, 185, 188, 209, 220
- Capital goods, trade in, 196-97
- Capital movements, 59, 61, 101, 102, 113-14, 124, 131, 133, 136; and agricultural prices, 192; as a source of exchange reserves, 32; control of, 50, 162-66, 185-89, 220-22; long-term, see Foreign investment; short-term, dis-equilibrating, 16, 21, 29, 72, 79, 102, 114, 118, 125, 138, 140-41, 164, 172, 186, 187, 210, 220, 221; short-term, equilibrating, 15, 16, 29, 64, 67, 71, 72, 100, 101, 104, 114, 116, 125, 192, 193
- Capital repatriation, 7, 33, 60, 123, 163
- Cassel, G., 47n.
- Central banks, 8, 18, 41, 42, 43, 45n., 57, 66ff., 154, 158, 193; cooperation of, 22, 28; domestic and international assets, 68ff.; establishment of, during '30s, 136, 193; policy in relation to international currency reserves, 55, 56, 66-112; reserve ratio, 10, 12n., 66, 67, 74, 78, 87n.; statutory reserve requirements, 9, 10-13, 31, 81, 94-98, 215
- Cheap money, 19, 20, 49, 109, 220
- Chile, 20, 30, 57, 69, 114; central bank, 95, 135; devaluation, 170; industrial production, 196; neutralization, 79
- China, exchange supported by U.S. Stabilization Fund, 160; gold dishoarding, 10
- Clearing agreements, 56, 177-83, 208, 223; as a form of exchange standard, 180-81; as a form of international barter, 177, 183, 185; blocked balances, 171, 175, 180; effect on prices, 183; exchange rates under, 168, 182; imposed by creditor countries to collect debt service, 178-79
- Colombia, 30, 69; credit contraction (1930), 82; exchange fluctuations, 128, 134; exchange rate and price of coffee, 134
- Commercial banks, 34, 56; cash ratios, 61, 62, 71, 80; foreign assets, 57
- Commercial bills, 61
- Commercial credits, 189
- Commercial policy, 139, 186, 206-9, 232
- Coordination of domestic policies (see also Synchronization), 14, 15, 20, 111, 130-31, 202; among leading industrial nations, 111; a prerequisite for exchange stability, 110, 131, 140, 229-32; lack of, in '30s, 129
- Copland, D. B., 53n.
- Costa-Rica, 134
- "Cover function" of gold and exchange reserves, 11, 19, 94-95
- Cover requirements (see also Central banks, reserve requirements), 11-13, 15, 18, 21, 96, 97; absence of maximum ratio, 11n., 23, 106; central banks, statutes concerning, 11; effect on available supply of international means of settlement, 11-13, 21, 215; link between gold and national prices, 22; maximum fiduciary issue, 10, 96; minimum percentage ratio, 10, 67
- Creditor countries, gold and exchange reserves, 40-41; restrictions on exports to Germany, 179
- Cuba, 192
- Currency areas, 131, 198, 230
- Currency stabilization, 32, 115-17, 120, 230
- "Cyclical equalization policy," 139-41, 187
- Cyclical fluctuations, see Business cycle
- Czechoslovakia, 30, 40, 69, 129, 169; central bank's reserve requirements, 97; deflation, 11; devaluation (1934-36), 128; exchange control, 176n.; exchange fluctuations, 121-22; exchange reserves, 34, 57; neutralization, 72, 79; trade-balance of fluctuations, 91
- Daladier, 78
- Danzig, 30, 57; on sterling exchange standard (1923-31), 56n.
- Debt repatriation in sterling area, 60
- Default, 204, 205
- Deflation, 23, 27, 32, 39, 74, 76, 82, 106, 108, 124, 127-28, 134, 139, 141-42, 152, 162, 166, 191, 220, 226, 228; and gold supply, 16, 17, 21; postponed by gold exchange standard, 41, 217; releasing reserves from "cover" for "international currency" function, 11, 21, 95

- Denmark, 30, 48, 50, 51, 52, 55, 59, 69, 96, 169; allocation of exchange for imports from U. K., 177, 178n.; central bank's statutes, 95; commercial banks' foreign liabilities, 57; early example of exchange standard, 29; exchange control, 51, 82-83, 162; external debt reduction, 60; industrial production, 196; limits of neutralization, 82; monetary policy (1935), 53, 83; neutralization, 79; reserve requirements, 97; speculative capital inflow prior to stabilization, 32, 121
- Devaluation, 128, 156, 166-67, 191; "all round," 18, 19, 22, 132, 135; and capital flight, 162, 221; and demand for gold, 16; and gold supply, 16-18, 20-21, 132-33; expansionary or deflationary effect, 127; of sterling followed by domestic expansion, 127
- Devaluation cycle, 122-31, 135
- Devaluation profit (see also Revaluation losses and profits), 153; allotted to Exchange Stabilization Fund, 148-50; sterilized, 152
- Direct investments, 204
- Discount policy, 162-63
- Discount rates (see also Interest rates), 15, 19, 20, 29, 61, 64, 67, 72, 77, 83, 102
- Discrimination, 173-75, 184, 186, 207-9, 221-23
- Disequilibrating capital movements, see Capital movements, short-term
- Disguised unemployment, 193, 199
- Distribution of wealth among nations, 25, 190, 218
- Dollar area, 198
- Domestic expenditure adjusted to meet changes in foreign expenditure, 53, 54, 111, 213-15, 228
- Economic stability, 15, 22, 24, 49, 53, 92, 105-12, 141, 191, 201-2, 213, 215, 229-32
- Ecuador, 30, 57, 128; exchange control, 172; reserve requirements, 97
- Egypt, 30, 48, 50, 51, 57, 59; cotton exports, 192; external debt reduction, 60; sterling reserves, 54, 55
- Eire, 48, 55, 59; gold purchase (1938), 56; industrial production, 196
- "Elastic expectations," 119, 138
- Elasticity of demand, discrimination according to, 186; for exports and imports, 119, 171n.
- Ellis, H. S., 167n., 171n., 180n., 209n.
- Embargo on gold exports, 128, 131
- Employment, 14, 15, 20, 22, 24, 45, 83, 94, 104, 105-7, 109-12, 129, 130, 139, 140, 142, 186, 187, 201-2, 204-5, 207-8, 213-15, 219, 225-26, 228, 230-32; and equilibrium rate of exchange, 14, 126, 137; effects of fluctuations in, on international currency system, 190; importance of adequate, in major industrial countries, 202
- England (see also United Kingdom), 96, 113, 191
- Equilibrating capital movements, see Capital movements, short-term
- Equilibrium rate of exchange, 14, 107, 124-26, 137, 182, 184-86, 211, 219, 225
- Equity form of investment, 204
- Estonia, 30, 48, 50, 51, 55, 57, 59, 84, 169n.; allocation of exchange for imports from U.K., 178; exchange control, 51, 162, 163; gold holdings, 55, 57; industrial production, 196; neutralization, 84
- Exchange adjustment, 91, 112, 136-42, 187, 214, 224-29; and commercial policy, 206; and distribution of international currency reserves, 26; by international consultation, 142, 226-27; for long-term disequilibria, 138, 141, 222; latitude for unilateral action, 141; of agricultural countries (1937-38), 135-36; of sterling-area countries, 50-54
- Exchange appreciation, 54, 135, 141; combatting inflation, 53, 228; effects on capital flow, 121; trade balance, 121
- Exchange control, 20, 65, 79, 81, 84, 103, 108, 119, 121, 122, 130, 135, 140-42, 155-56, 161, 162-89, 200, 206, 211, 214, 220-24, 227-29; allocation of exchange, 173-76, 178, 185; anti-depression policy, 186; bilateralism, 177-83, 223; capital movements, 162-66, 185, 187-89, 220-22; cooperation between capital-losing and -receiving countries, 164, 188-89, 222; costs of trading, 169, 183-84; discrimination, 173-75, 185-86, 223; domestic prices, 165, 167; evasion, 165; exchange of information on foreign balances, 188-89, 222; exchange rates, 166-72, 185; exchange rationing, 166, 173, 185-87, 221-24, 227, 229; export proceeds, 166, 170, 172; extension of free-market transactions, 170; fear of inflation, 167; fiscal considerations, 170; foreign debt service, 167, 178-79; functions, 183-89; import restriction, 168, 176; international currency reserves, 166; monetary expansion, 130, 186; relaxation, 169; state intervention, 186; sterling area, 47, 51, 65; terms of trade, 186; tightened in 1937 recession, 135, 170; trade regulation, 172-76; "unilateral," 165
- Exchange depreciation, 7, 29, 73, 81, 84, 107-9, 112, 128, 140, 207, 223, 227; agricultural countries, 86, 124, 130n., 193, 207; anti-depression policy, 112; "beggar - my - neighbour" (exchange

- dumping), 129, 202, 227; breakdown of gold exchange standard, 44; "buffer policy," 200n., 228; capital flow, 113-14; competitive, 52, 129, 144, 227; effects on trade balance, 119-20; European countries in early '20s, 113-16, 219; inflation, 113-15, 167; monetary expansion, 130; post-war import needs, 113, 114, 117, 119n., 137, 219; price of gold, 8, 131; reparations, 113; revival of aggregate demand, 129; self-aggravating, 123, 211; shortage of working capital, 113, 136; sterling area, 50-54; trade expansion, 129; world market prices, 114
- Exchange Equalization Account, see United Kingdom
- Exchange fluctuations, 8, 39, 113-42, 200, 212; agricultural countries, 134-36; domestic money markets, 121-22; international economic equilibrium, 155; need for international currency, 8, 14; price fluctuations, 134; psychological theory of, 118; seasonal, 139, 143
- Exchange premium, 168, 170-71
- Exchange rates, 8, 9, 14, 15, 29, 85, 159, 222; "artificial," 166, 172; bilateral clearing, 181-82; equilibrium, 124-26, 137, 182, 184, 185, 219; need for international agreement, 64, 116, 137, 141, 226, 230; not widely different in 1930 and 1936, 128-29; post-war establishment of, 137-38, 226; prices as a guide to equilibrium, 125, 137; return to pre-war parities, 113-14, 116-18, 121, 124-25, 137, 191; sterling area, 50-54
- Exchange rationing, see Exchange control
- Exchange reserves (see also International currency reserves), 12, 13, 16, 30-39, 40, 47, 56, 57, 60, 63-64, 82, 132
- Exchange stability, 15, 23, 29, 46, 53, 85, 88, 93, 109, 110, 116, 121, 131, 140, 143-44, 172, 210-12, 225, 231; among reserve centres, 46; as a consequence of domestic stability, 229-32; necessary for domestic stability, 137, 211; sterling area, 50, 52, 53, 88
- Exchange Stabilization Funds, 8, 81, 118, 121, 123, 143-61; appropriateness of, 155; as a means of absorbing central bank's exchange profit and loss, 159; as an instrument of gold settlement system, 143, 155; as a weapon of currency warfare, 159; assets of, 147-50; compared with exchange control, 155-56; contributions to currency machinery, 155-57; costs and profits of, 159-60; definition, 143, 155; diversity in operations and policy, 144-46, 154; effects on credit structure, 150-54, 156; floating debt, 153; forward exchange dealings, 157; initiative of, 159; interest on public debt, 160; relations between American and British, 147, 157-58; relations with central bank and treasury, 153-54; secrecy, 157-58; separation of domestic from international reserves, 153-55; transfer of central banking functions to, 158
- Exchanges, freely fluctuating, 8, 14, 117-22, 123, 136-38, 210-11, 225; causing shifts in domestic resources, 138, 210; speculative disturbances, 123, 138, 210; trading risks, 92, 137-38, 210
- Excess reserves, 81, 152
- Export licenses, 172
- Export subsidies, 85, 171, 194
- Export tax, 194
- Federal Reserve Bank of New York, 32
- Federal Reserve System, 71, 73-75, 81, 96, 145; Board of Governors of, on objectives of monetary policy, 106n., 109-10
- Finland, 30, 48, 50, 51, 53, 59, 69; commercial banks' foreign assets, 57; deflation, 11; fiduciary issue, 96; foreign debt repayment, 60; gold holdings, 33, 55, 57; imports of capital goods, 197; industrial production, 196; neutralization, 54, 79; trade-balance fluctuations, 91
- Floating debt, 122, 153
- Foreign debt service, 134, 162n., 164, 167, 170, 178-79
- Foreign exchange, see Exchange
- Foreign investment and lending, 15, 36, 42, 60, 92, 101, 125, 189, 191, 202-5, 224, 229; and distribution of international currency reserves, 26, 93, 112, 202, 219; and distribution of productive factors, 202; and prices of primary products, 192, 203; and standards of living, 203; cessation of, in '30s, 16, 26, 40, 46, 197, 203; effects on employment in lending country, 112, 202; forms of, 204-5; impeded by political upheavals, 205; industrialization, 196-97; reconstruction loans, 93, 219; variability of, 16, 91, 193, 203, 205
- "Foreign trade multiplier," 101n.
- Forward exchange, 36, 138, 157, 210
- France (see also Bank of France), 16, 20, 29n., 31, 51, 57, 61, 69, 76, 79, 116, 122, 129n., 130; agreement with Sweden (1936) concerning information on foreign assets, 164, 189n.; agreement with U.S.A. (1939), 164-65; balance-of-payments surplus, 7, 35-39, 78, 89, 90, 106, 107, 223; capital flight, 35, 76, 78, 79, 90, 114; conversion of exchange reserves into gold, 38-39; deficit fi-

- nance and wage increases (1936), 128; devaluation (1936), 123, 153, 226; exchange depreciation in early '20s, 31, 35, 76, 90, 117-19, 122, 211; Exchange Stabilization Fund, 123, 144; franc pegged to sterling (1938), 52, 131; gold exchange standard, 35-39, 42, 46; gold hoarding, 16; gold imports, 7, 39; gold stocks, 16, 40, 77, 89, 90; manufacturing production, 107, 195; neutralization, 38, 39, 76-79, 81, 87; overvaluation and foreign trade (1935), 168, 183, 224; quantitative trade restrictions (quotas), 164, 206, 226; repatriation of capital, 7, 33, 36, 37, 39, 78, 90, 107; reserve ratio, 96-97; return to gold standard, 7; share in world trade, 168; stabilization (1926-28), 31, 33, 36, 37, 76, 120; trade-balance fluctuations, 78, 91, 119-20; undervaluation (1926-30), 33, 36-38, 101n., 106-7, 227
- Free-market economy, 23
- Frozen debts, 175
- Gayer, A. D., 75n.
- Genoa Conference, 7, 21, 27, 28, 30, 43
- Germany, 20, 20n., 30, 32, 69, 72, 89, 96n., 116, 180, 196-97; balance of payments (1924-32), 34, 102-4; bilateral clearing with variable exchange rates, 182; bilateral clearings of "Swedish agreement" type, 179-80; blocked debts, 176; clearing trade of, 171, 180-83; credit contraction (1930), 82; devaluation opposed, 167, 168, 171; exchange control, 8, 103, 171, 172, 211, 226; export subsidies, 168, 171-72; from creditor to debtor status, 191; gold and exchange reserves, 12, 34, 132, 173, 176; gold exchange standard, 33-34, 42; industrial production, 49, 195; inflation, 167; "inflation psychosis," 172; neutralization, 79; overvaluation and foreign trade, 168, 171-72, 179, 180-82, 184; price control and rationing, 167; reparations, 103, 192; reserve requirements of central bank, 12, 96-98; share in world trade, 168, 183; short-term capital movements and central banking, 72; state regulation of trade, 186; trade-balance fluctuations, 91; trade campaign in south-eastern Europe, 168
- Gilbert, Milton, 130n.
- Gold, 7, 47, 48, 88, 116; as a balancing item in the gold settlement system, 155; as a domestic means of payment, 22, 52n., 216; as a means of settlement between sterling group and outside world, 64; as an international means of settlement, 9, 13, 19, 66, 160, 216, 229-30; as a vehicle for "hot money," 9, 16, 90, 94, 123, 132; economy of, 11, 12, 41, 42, 46, 55; hoarding and dis-hoarding of, 8, 9, 10, 16, 21, 133; industrial demand for, 9-10; price of, 9, 16-19, 21, 22, 27, 131-32, 145-47, 150-51, 156-57, 159-60, 216; scramble for, 7, 27, 39, 41; shortage of, 7, 13, 27, 216; "undue fluctuations in the purchasing power of," 22, 28, 231
- Gold bloc, 41, 198; devaluation, 9, 128, 142; import restrictions, 168, 184, 206; overvaluation, 206
- Gold bullion standard, 44, 66
- Gold certificates, 11, 73
- Gold coins, withdrawal from circulation, 7, 10, 11, 22, 52n., 89, 113
- Gold Delegation, see League of Nations
- Gold exchange standard, 7-9, 12, 19, 21, 26, 27-46, 55, 56, 64, 67, 88, 146, 216-17; alleged unilateral adjustment, 44-45; antecedents, 28-30; breakdown of, 8, 31, 39-41, 43-44, 56, 132, 177, 217; central banks' statutes, 30-31, 39; compared with German clearing system, 181; inflationary effects, 42; lack of a single centre, 46, 217; merits and defects, 41-46; responsibility of centre country, 45-46, 216-17; short-term loans, 32, 64, 217-18; succeeded by sterling area, 19, 56
- Gold movements, 15, 29, 44, 61, 66, 67, 71, 75, 86-88, 99, 102, 217, 232; and domestic credit supply, 45, 70, 213-14
- Gold points, 15, 52, 100, 101
- Gold production, 7-9, 17-19, 21, 22, 26, 27, 40-42, 48, 60, 64, 109, 132, 216
- Gold reserves (see also International currency reserves), 7, 12, 13, 18, 24, 40, 57, 82; in sterling area, 54-60; maldistribution of, 26, 89, 93, 218; under gold exchange standard, 33-35; value of, increased by exchange depreciation, 8, 18, 21, 23, 132-33
- "Gold scare," 133
- Gold settlement system, 9, 20, 131, 143, 145-47, 155, 159, 160
- Gold specie standard, 66
- Gold standard, 7, 47, 51, 62, 66, 71, 73, 74, 76, 87-88, 104, 105, 117, 124, 143, 155-56, 167, 207, 211; and exchange stability, 121, 140, 231; and synchronization of business cycles, 22, 140, 213, 230; before 1914, 29, 67, 100, 134, 139, 140, 195, 197, 231; in '20s, 27, 190, 192
- Gordon, M. S., 166n.
- Great Britain, see United Kingdom
- Greece, 29n., 30, 50-52, 69, 169n.; exchange control, 162; gold and exchange reserves, 33; industrial expansion, 196; neutralization, 79; reserve requirements, 97; tobacco exports, 192
- Gregory, Sir T. E., 76n.
- Haberler, G., 101n., 127n., 131n.

- Hall, N. F., 158n.
Hansen, A. H., 196n., 202n.
Hardy, C. O., 73n., 74n.
Harris, S. E., 130n.
Harrod, R. F., 99n., 104n.
Hawtrey, R. G., 46n.
Henderson, H. D., 104n.
Holland, see Netherlands
Horne, Sir Robert, 27
"Hot money" (see also Capital movements, short-term, disequilibrating), 19, 61, 62, 80, 90-91, 94, 102n., 124, 141n., 152, 165n., 220; curbed by exchange control, 162, 187, 222; induced by exchange fluctuations, 132-33, 141; offset by Exchange Stabilization Funds, 80, 81, 156
Hull, Cordell, 179
Hungary, 30, 32, 69, 83, 89, 116, 169n.; central bank's reserve ratio, 96, 97; credit contraction, 82; exchange premia, 171; gold and exchange reserves, 33, 56, 57; neutralization, 79; overvaluation, 171; trade-balance fluctuations, 91
Import licenses, 176, 178n., 183-84, 206
Import quotas, 142, 168, 175, 177-78, 184, 187, 206, 208, 211, 223-24, 226
Import restrictions, see Trade restrictions
India, 20, 48, 50, 51, 55, 57, 58, 59, 84, 129n., 134, 136; central bank, 54, 193; exchange standard, 29, 30; external debt reduction, 60; gold dishoarding, 10; industrial production, 195, 196; neutralization, 84; trade-balance fluctuations, 91
Industrialization, 136, 195-99, 201
"Infant industries," 207
Inflation, 11, 23-26, 37, 41, 54, 73, 74, 77, 94, 96, 111, 113-15, 117, 125, 133, 135, 137, 152, 167, 191, 215, 220, 221, 225n., 228-29
Interest arbitrage, 157
Interest rates, 20, 29, 32, 34, 43, 44, 60, 64, 67, 71, 72, 80, 82, 83, 92, 101, 104, 106, 115, 121, 125, 128, 160, 187n., 205, 220
International currency reserves, 7-26, 38, 41, 66-112, 138, 166, 206, 212-19, 229; and capital flight, 80, 143, 162, 183, 220; and capital movements, 90, 91, 202; and cover reserves, 10, 11, 153-55, 230; and cyclical equalization, 140, 186, 187; and exchange control, 159, 166, 181, 188; and inflation, 23-24; and multilateral trade, 177, 199; and post-war import needs, 25, 93, 113, 137, 219; buffer function of, 23, 86n., 92, 105-6, 111n., 112, 208, 213, 216, 227; demand for and supply of, 9, 13, 14, 15, 16, 20, 21; distribution of, 19, 26, 88-94, 218-19; equilibrium level of, 93, 94; expenditure of, 23, 24; need for, 90-94
International division of labour, 186, 208, 229
International investment, see Foreign investment
International liquidity (see also International currency reserves), 23, 24, 25, 46, 133, 212, 217, 227; increase in, due to new production and revaluation of gold, 18-20
International liquidity crisis (1931), 25, 43, 64, 132
International margin, 20, 23, 130, 215
International means of settlement, see International currency reserves
Iran, 47, 51
Iraq, 50, 51, 59
Ireland, see Eire
Italy, 20, 29n., 30, 57, 69, 116, 122, 129n.; credit contraction, 82; fiduciary issue before 1914, 96; exemption of new foreign loans from exchange control, 163; gold exchange standard, 33-34, 40, 42; neutralization, 79; reserve requirements, 12, 96, 98; speculative capital inflow before stabilization, 32; trade-balance fluctuations, 91
Iversen, C., 53n., 54n.
Janssen, A. E., 29n.
Japan, 20, 30, 31, 47, 50, 51, 69, 96; balance of payments in early '20s, 73n.; fiduciary issue, 96; industrial expansion, 195; sterling area, 47; undervaluation after 1931, 52; yen area, 198
Johnson, G. G., 149n., 158n.
Keynes, J. M., 45n.
Kindersley, Lord, 60
Lary, H. B., 107n.
Latvia, 30, 48, 50, 51, 59, 97; commercial banks' foreign liabilities, 57; exchange control, 51, 56, 169; gold and exchange reserves, 33, 55, 56; industrial expansion, 196; sterling area, 47
League of Nations, 18, 32, 44n., 47n., 53n., 54n., 60n., 104n., 107, 110, 111n., 131n., 134n., 163n., 164n., 165n., 166, 168n., 169n., 170n., 173n., 174n., 177n., 180n., 182n., 183n., 186n., 189n., 194n., 196; Delegation on Economic Depressions, 135n., 231n.; Economic and Financial Committees, 29n., 30, 188, 232n.; Gold Delegation, 7, 8, 12, 21, 22, 43n., 74n., 75, 76n., 87, 96n., 97
Lehfeldt, R. A., 21
Lester, R. A., 121n.
Liquidity, 70; and speculation, 37; increase in, 22, 137, 220

- Lithuania, 33, 57, 84
 Loan contracts, rigidity of, 204
 London Clearing Banks, 61-63
 London Monetary and Economic Conference (1933), 12, 21, 44n., 97, 130, 144
 Loveday, A., 200n.
- Macmillan Committee (U. K.), 11, 67n., 87, 97, 126
 Meade, J. E., 104n.
 Mexico, 128
 Meyer, F., 172n.
 Migration, 192-93, 199, 203
 Mlynarski, F., 42n.
 "Monetary autarchy," 14, 84, 105
 Money rates, see Interest rates
 Moratoria, 163, 178, 188
 Most-favoured-nation, 174
 Multilateral trade, 162, 175, 177, 182-83, 199, 209, 230
- National income, 14, 22, 24, 86n., 94, 105, 108, 110, 111, 112n., 128-29, 134, 139, 186, 192, 199, 201, 205, 212-14, 224, 228, 232
- Netherlands, 29n., 69, 79, 113; commercial banks' cash, 71, 80, 152; cover ratio, 96; deflation, 11; gold and exchange reserves, 33, 40, 57, 89, 90, 151; Exchange Stabilization Fund, 83n., 144, 146, 151, 156; trade-balance fluctuations, 91
- Netherlands Indies, trade-balance fluctuations, 91
- Neutralization, 45, 63, 68-88, 105-6, 118, 152, 154, 156-57, 213, 214-15, 232; and "autarchy," 80, 84; and capital movements, 72, 153; in agricultural countries, 86, 194; limits of, 80-81, 106; loosening link between international reserves and domestic money, 98
 "New Plan," 176
- New Zealand, 30, 50-52, 58, 59, 84, 124, 134, 136; capital-goods imports, 197; central bank, 51, 58, 79, 193; exchange control, 51, 79, 86; gold reserves, 55-56; industrial production, 195; neutralization, 79, 84, 86; trade-balance fluctuations, 79, 91
- Niemeyer, Sir Otto, 43n.
- Norway, 29n., 48, 50, 51, 59, 69, 96n., 116; commercial banks' foreign assets, 57; deflation, 11; exchange appreciation, speculative capital imports and trade balance, 121; external debt reduction, 60; fiduciary-issue system, 96; gold and exchange reserves, 55-57; gold exchange standard, 29, 31, 33; neutralization, 79
- Offsetting, see Neutralization
- Ohlin, B., 99n., 163n., 196n.
- Open-market operations, 67, 70, 72, 77, 82, 87, 127, 128, 143
- Ottawa system of imperial preference, 48, 50
- Overvaluation, 64, 78, 117, 124, 127, 137, 139, 142, 166, 167, 169, 224, 226; and bilateral clearing, 172, 179-82; and international trade, 167-69, 184-85; maintained by import restrictions, 184, 187; of German mark, 168, 172, 180, 182, 224; of gold-bloc currencies, 184, 206; of sterling, 117, 124, 126, 139, 206
- Paish, F. W., 18n., 151n.
- Palestine, 54, 55, 56, 59
- Payments agreement, 179
- Peru, 30, 69, 84, 124, 134; capital-goods imports, 197; deflation, 11; exchange depreciation, 135; neutralization, 84, 86, 135-36
- Philippines, 30
- Poincaré, 76, 120
- Polak, J. J., 114n.
- Poland, 20, 30, 57, 69, 89, 114, 168; capital-goods imports, 197; credit contraction, 82, exchange control, 82, 83, 163; gold exchange standard, 33, 40, 42; neutralization, 84; share in world trade, 169, 184
- Portugal, 30, 33, 48, 50, 51, 55, 57, 59, 84, 116; exchange control, 162; external debt reduction, 60; sterling area, 47
- Prices, 14n., 22, 27, 45, 67, 99, 102, 103, 104, 106, 114, 116, 124-27, 137, 165, 180, 184-85, 187, 211, 225-26, 229, 231; and equilibrium rate of exchange, 125-27, 137
- Primary producing countries, see Agricultural countries
- Primary products (see also Agricultural products), price fluctuations of, 62, 40, 42, 86n., 117, 119, 124, 134-36, 139, 170; world demand for, 55, 170
- "Private clearing," 168-69
- "Psychological theory" of exchange fluctuations, 118
- "Purchasing power parity," 125-26
- Quota system, see Import quotas
- Reichsbank, 34, 72, 102, 132, 173, 176
 "Reichsmark area," 181, 198
- Reparations, 103, 113, 192, 204
- Revaluation losses and profits, 78, 133, 136, 148-49, 152-53, 158, 160
- Roberts, G. E., 74n.
- Robertson, D. H., 95n.
- Roca-Runciman Agreement, 174, 175
- Rogers, J. H., 128n.
- Roumania, 29n., 30, 57, 69, 169n.; clearing value of reichsmark, 171; credit contraction, 82; exchange premia, 171;

- industrial production, 196; neutralization, 79
- Royal Institute for International Affairs, 43n.
- "Rules of the game," 66-68, 70-72, 77, 84, 87-88, 213, 215, 232
- Russia (see also U.S.S.R.), 29, 36
- Salera, V., 172n.
- Salvador, 95, 134
- Scarce currencies, apportionment of, 224
- South Africa, see Union of South Africa
- Soviet Union, see U.S.S.R.
- Spain, 29n., 30, 96n.
- Speculation, 24, 32, 37, 115-17, 121, 123, 131, 138, 149, 157, 220
- Stabilization loans, 25, 32, 93, 219
- Standstill agreements, 163, 188
- Sterling area, 8, 9, 19, 27, 47-65, 67, 88, 198, 217; balance of payments, 59, 62, 64; central management, 63; compared with clearing system, 181; debt repayment, 59, 60; exchange control, 47, 51, 65; exchange rates, 50-54; fall in sterling and raw-material prices (1938), 134-35; gold and exchange reserves, 10, 54-60, 64; inconveniences to centre country, 63-64; liquidity of centre, 64; trade balance, 58, 59, 62; trade expansion, 53, 210
- Sterling exchange standard, see Sterling area
- "Surplus" reserves (see also International currency reserves), 9, 12, 13, 18, 22, 95
- Sweden, 29n., 33, 48, 50, 51, 53, 59, 63, 69, 84, 96n., 113, 129n.; agreement with France on exchange of information, 164, 189n.; commercial banks' foreign assets, 57; currency appreciation (1916-18), 228; early example of gold exchange standard, 29; exchange depreciation and capital outflow (1931), 123; gold reserves, 40, 55, 56, 57, 89, 90; government capital outlay reduced (1936-37), 54; industrial production, 196; neutralization, 53, 54, 79, 80n.; raw-material purchases (1937), 23n.; trade-balance fluctuations, 53, 91
- "Swedish Agreement," 180
- Switzerland, 29n., 69, 79, 96n.; commercial banks' cash, 71, 80, 152; Exchange Stabilization Fund, 144-46, 151, 156, 158; foreign funds, 165; gold reserves, 40, 57, 89, 90; neutralization, 71, 80; trade-balance fluctuations, 91
- Synchronization of business cycles and domestic policies (see also Coordination), 105, 126n., 219, 230; as a prerequisite for exchange stability, 110, 140; balance-of-payments discrepancies due to incomplete, 15; before 1914, 14; need for international currency due to imperfect, 14, 19, 111-12; under gold standard, 22, 104, 212, 232
- Tariffs, 21, 49, 94, 108, 125, 175, 184, 206, 207
- Tasca, H. J., 179n.
- Taussig, F. W., 99
- Technological change, 126, 139, 212, 230
- Terms of trade, 49, 139; and redistribution of international currency, 94; depression in primary producers', 79, 135, 193; exchange control as a means to improve, 186
- Thailand, 50, 51, 59; external debt reduction, 60; gold and exchange reserves, 55, 56
- Timbergen, J., 104n.
- Trade agreements, 48, 53, 108, 174
- Trade cycle, see Business cycle
- Trade restrictions, 21, 23, 108, 112, 141, 174, 202, 206, 220, 222-24, 226-29
- Treasury bills, 60-63, 85, 122, 156, 160
- Tripartite Agreement, 9, 131, 141, 147, 157, 159, 226
- Undervaluation, 52, 64, 117, 124; of French franc after 1926, 36, 106-7, 211, 217, 227; of sterling after September 1931, 127
- Unemployment, 14n., 24, 111, 126, 131, 137, 138, 185, 192, 193, 201, 204, 210, 225, 226, 229
- Union of South Africa, 48, 51, 59, 69; central bank's domestic and international assets, 83; commercial banks' external assets, 57; devaluation, 17, 50; external debt reduction, 60; gold production, 17, 60; gold reserves, 55, 57; industrial production, 195; reserve requirements, 95, 97; taxation of gold-mining profits, 17
- Union of Soviet Socialist Republics (U.S.S.R.), 30, 196
- United Kingdom (see also Bank of England), 20, 25, 32, 43, 48, 49, 52, 58, 60-64, 69, 71, 75, 84, 116, 126, 129n., 198, 217, 225; abandonment of gold standard, 39, 46, 124, 127; affected by sterling area's balance of payments, 64-65; allocation of exchange for purchases in, 174, 178; cheap money, 49; Committee on Finance and Industry (1931), see Macmillan Committee; composition of exports (1880-1929), 197; control of foreign capital issues, 50; Cunliffe Committee, 67; Currency and Bank Notes Act (1939), 151n., 153, 158; decline of overseas investment, 60; Exchange Equalization Account, 12, 16, 50, 61, 62, 81, 90, 98, 118, 146-47, 151, 153, 156, 157, 160-61; export markets, 52, 178, 195; gold reserves, 16, 39, 40, 89, 90, 160; imports,

- 49, 54, 58; industrial production, 49, 127; industrial revolution, 195; international margin, 130-31; neutralization, 75-76, 80, 81; proposal for International Clearing Union, 176, 218n.; recovery after 1932, 49, 127; trade agreements, 48, 174, 178; trade-balance fluctuations, 91; trade with sterling-area countries, 48, 49, 58, 59, 62
- United States (see also Federal Reserve), 20, 25, 32, 46, 60, 69, 71, 79, 84, 109, 129n., 135, 202; agreement with France for exchange of information on foreign funds, 164-65; agreements for fair treatment by exchange-control countries, 174-75; balance-of-payments surplus, 90, 223; change from debtor to creditor, 192; collection of debt service from Germany, 178-79; commercial banks' cash, 71, 81; composition of exports (1880-1929), 197; concentration of gold in, 26; credit expansion (1925-29), 75; Department of Commerce, 102n., 107-9, 120n., 203, 207n., 223n.; Department of State, 179n.; devaluation, 127-28; excess reserves, 71, 80, 81, 152; Exchange Stabilization Fund, 144, 146, 159-61; Export-Import Bank, 205; foreign assets in, 165n.; foreign lending in '20s, 203; gold-buying policy (1933), 123n.; gold cover ratio, 75, 96; gold hoarding, 16; gold movements, 71, 73-75, 80, 81; "gold scare," 133; gold-sterilization policy (1936-37), 80, 150, 153, 160, 165n.; gold stock, 16, 40, 74, 90; imports, 49, 108, 127; industrial activity, 49, 108, 127, 195, 198; international currency plan, 218, 224; international repercussions of business fluctuations in, 107-9; neutralization, 73, 74, 80, 81, 87; position under gold exchange standard, 46; President, 165n.; price level (1938), 126; reciprocal trade agreements, 108; silver purchases, 108, 160; tariffs, 94, 108, 207; trade balance, 91; Treasury, 9, 80, 133, 145, 146, 147, 165n., 188, 224n.; withdrawal of foreign balances (1931-32), 40
- Uruguay, 30, 52, 69, 91, 134, 135; appreciation of free exchange rate, 170; neutralization, 79
- Variability of trade balance, 91
- Velocity of circulation, 100, 152, 165
- Venezuela, 30, 136; central bank, 193; exchange rate and price of petroleum, 134
- Viner, J., 165n., 174n., 178n.
- Wages, 115, 120, 125, 137, 167; reduction in, 225, 226; rigidity of, 14, 17, 126, 225
- Weiller, Jean, 119n.
- Whale, Barret, 99n.
- White, H. D., 99
- Williams, J. H., 105n., 211n.
- Withdrawal of foreign credits, 40-41, 46, 64, 79, 80, 82, 132, 167, 185, 187, 217-18, 220
- Working capital, 136; post-war needs for, 113-16
- Yen area, 198
- Yugoslavia, 30, 52, 69, 169n.; exchange premia and free market, 171; gold and exchange reserves, 33-34